



A Weekly Journal of the Chemical and Drug Trades
and of
British Pharmacists throughout the Empire.
ESTABLISHED 1859.

The CHEMIST AND DRUGGIST is the leading journal addressing the chemical and drug trades of the British Empire. It is adopted as an official journal by nineteen Chemists' Societies in Australia, Ireland, New Zealand, South Africa and the West Indies, and its paid-in-advance circulation in Great Britain and all Countries having business relations with the British Empire is intrinsically and numerically unique.

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Ten shillings a year in advance, post free to any part of the world, including a copy of *The Chemists' and Druggists' Diary* next published. Subscriptions may begin any month. Single copy, 6d.; Summer or Winter Number, 1s. *Diary*, 6s. Postal orders and cheques to be crossed "Martin's Bank (Limited)."

Prix de l'abonnement annuel: le journal une fois par semaine, et l'agenda une fois par an, 12 60 francs, francs.

Jährlicher Abonnementspreis: die Zeitung einmal wöchentlich, und der Notizkalender einmal im Jahre, 10 Mark, postfrei.

Precio de suscripción anual: el periódico una vez por semana, y el agenda una vez por año, 12-60 pesetas, francos.

Terms for advertising in THE CHEMIST AND DRUGGIST can be obtained on application to the Publisher at the

Head Office: 42 CANNON STREET, LONDON, E.C.

Telegrams: "Chemicus London." Telephone 8522 Bank (two lines).

Branches: ADELAIDE, MELBOURNE, AND SYDNEY, AUST.

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THE CHEMISTS' REFERENCE-BOOK.

Manufacturers and others who have specialities to place before those connected with the drug, chemical, and allied trades are reminded that THE CHEMIST AND DRUGGISTS' DIARY for 1911 will be published early in November. One or two points in connection with the Diary are worth noting:

1. It is the recognised reference book throughout the year for chemists all over the British Empire.
2. It contains general, legal, and technical information of the highest value to all sections of the trade.
3. It is handsomely bound and a convenient size for the desk.
4. It contains a useful and comprehensive Buyers' Guide.

These are only four of many features which make the Diary a work that is constantly being referred to by buyers, and thus it is invaluable to advertisers. The Publisher has prepared an illustrated descriptive circular containing facsimile pages from last year's Diary, and he will be pleased to send a copy to anyone who writes for it to 42 Cannon Street, London, E.C.

Summary of this Issue.

The more notable items only are dealt with.

Articles and Communications.

Notes on several new books are given on p. 60.

Some information on lavender-growing is given in an article on p. 50.

The solubilities of all the quinine salts have been redetermined by Dr. G. I. Schaefer (p. 58).

Mr. E. J. Parry contributes a further series of refractometer determinations of essential oils (p. 52).

The chief alkaloidal salts of guaiacol-sulphonic acid and creosote-sulphonic acid are described on p. 59.

A review of the various systems of keeping accounts, which is given on p. 56, favours the card-index method.

Ether-drinking is prevalent in a well-defined area in Ulster; Dr. Calwell's inquiry on the subject is mentioned on p. 51.

Some interesting facts about hop-growing are communicated by "Xrayser II.," who has also notes on *status lymphaticus* and educational matters (p. 47).

The census of pharmacies and pharmacists in Germany which was undertaken last year is complete. We note the chief features on p. 50. There are in Germany 6,127 pharmacies and branches, and 13,425 persons employed therein.

The letters this week deal with an unusual variety of subjects. Mr. Ashton tackles the prescription problem which was suggested by "Xrayser II.," other correspondents write on the proposed curriculum, chemists' combines, shop hours, the early use of cocaine, tr. *rhei amara*, red-water in cattle, and the destruction of worms in lawns (p. 65).

The Week's News.

The report of the Inspectors of Explosives for the year 1909 is epitomised on p. 51.

Useful hints on photographic matters are contained in a column of "Photographic Notes" (p. 57).

The Hungarian Minister of the Interior is considering whether he should impose a tax on proprietary medicines (p. 39).

The increased use of glasses, the official colour-tests, and the methods of testing for myopia are the subjects of observations on p. 57.

The Pharmaceutical Society of Ireland have secured the conviction of a shopkeeper who sold Harvey's powders, corrosive sublimate, and oxalic acid (p. 43).

"Queensland is in a hurry" to obtain reciprocity of pharmaceutical diplomas with this country, states an official of the Pharmaceutical Society of Great Britain (p. 51).

We give further notes on the British exhibits at the Brussels Exhibition, in continuation of those in the Summer Number. The whole of these exhibits were destroyed by fire last Sunday night (p. 40).

The meeting of chemist-extractors has been altered to September 8, for reasons explained by Mr. Meakin (p. 65). We show the need for a combination of chemist-extractors, whose interests are attacked by the draft Dental Bill (p. 48).

Trade and Market Matters.

St. Vincent arrowroot growers and exporters have formed an Association to exploit new markets and to maintain a minimum price (p. 64).

Linseed and cottonseed oils are very dear, and are likely to remain so for the remainder of the year, for reasons outlined in our editorial article on p. 49.

Market price-alterations include an advance in soda tartrata, pulv. seidlitz, rose-petals, menthol, and American peppermint oil. Castor and ground-nut oils, quicksilver (seconds), and serpentine are cheaper. Bergamot, lemon, and orange oils have all an easy undertone. Tartaric acid and cream of tartar are very firm, owing to the poor vintage in France, Spain, and Italy (p. 61).

English and Welsh News.

When sending Newspapers containing Trade news to the Editor
please mark the items.

Brevities.

The National Union of Assistant Pharmacists have conveyed to the Pharmacists' Assistants' Union, Paris, fraternal greetings and wishes for success in the agitation against excessive hours of labour.

A window-smash at the pharmacy of Mr. R. T. Simpson, chemist and druggist, at the corner of Cheapside and North Road, Lancaster, was caused by a Preston cyclist while riding towards a Territorial battalion losing his head and colliding with the shop-front. The cyclist was taken to the infirmary suffering from concussion.

At Cambridge a gardener's prompt action on August 9 in telephoning from Halesowen, Hills Road, Cambridge, the residence of Mr. E. Saville Peek, M.A., Ph.C., resulted in the capture of a man who had broken into the house of Dr. Franken Evans. Later in the day the intruder was brought before Mr. H. F. Cook, J.P., pharmacist, so that the affair proved to be a decided medical and pharmaceutical *entente*.

Passers by the pharmacy of Mr. J. Spencer Palmer, chemist and dental surgeon, Thornbury, Glos., on August 14, were startled by dense volumes of smoke-like vapour being emitted from the cellar under the shop. The resemblance to fire was due to ammonium-chloride fumes consequent upon the subjugation of ammoniacal vapours from a broken Winchester by means of hydrochloric acid. The trouble was caused in the first instance by the bursting of a quart jar of hydrogen peroxide.

Special courses of advanced lectures, beginning on October 4, are announced to be held in connection with the Imperial College of Science and Technology, South Kensington. The subjects include fungal diseases of plants and their remedies, experimental zoology, entomology, artificial and natural selection, economic geology, colour vision, spectroscopy, radio-activity and electric discharge, measurement of high temperatures and optical pyrometry, and magnetic properties of metals and alloys. The details may be had by addressing the secretary.

The Supply of Diphtheria Antitoxin.

The Local Government Board has made an Order sanctioning the provision by the councils of county boroughs, urban districts, and rural districts throughout England and Wales of a temporary supply of diphtheria antitoxin and of medical attendance in connection therewith. The free provision of diphtheria antitoxin, authorised by the Order, is not to be regarded as a substitute for removal to hospital of a patient suffering from diphtheria, nor as implying that the patient to whom the antitoxin has been administered may properly be retained for treatment at home, unless means are available for his efficient isolation to the satisfaction of the medical officer of health. On the other hand, the prompt administration of antitoxin before the patient is removed to the hospital may, especially if delay in removal is inevitable, go far towards preventing the attack of diphtheria from being fatal. It is suggested further that the arrangements which the Councils may make for the supply of diphtheria antitoxin should be brought to the knowledge of all medical practitioners practising within their jurisdiction, and that in any circular letter which the Councils send out to medical practitioners emphasis should be laid on the importance of prompt treatment by antitoxin and of the saving of life which may thereby be effected.

London School of Tropical Medicine.

Sir Francis H. Lovell, C.M.G., who has already carried out several missions on behalf of the London School of Tropical Medicine to various parts of the British Empire, is to undertake another to the West Indian Colonies. Sir Francis, who is the Dean of the School, the headquarters of which are at the Albert Docks, in the East India Dock Road, is a retired member of the Colonial Medical Service, and on the present occasion he proposes to complete his tour of the West Indian Colonies, from which he has only just returned to this country. Accordingly he will pay visits to the Bahamas, British

Honduras, and Bermuda, in all of which he will advocate the claims to public support of the School in which he takes so much interest. Dr. Sambon, one of the lecturers at the School, has just returned to London from a long stay in Italy, in the course of which he has conducted a scientific investigation into the causes of pellagra; and Dr. Bahr is understood to be still in Fiji, where he went on behalf of the London School to study the diseases most prevalent in that part of the world.

The Public Weal.

The names of the following gentlemen have been added to the Commission of the Peace for their respective counties :

Mr. Wm. Brettle, of Messrs. Glover & Sons, surgical-hosiery manufacturers, Carlton, Notts.

Alderman Henry Dunn, Ph.C., of Shipley, West Riding, Yorks.

Mr. W. Oldershaw, chemist and druggist, Strelley, Notts.

Sale of Food and Drugs Acts.

The Kent county analyst certified all the drug-samples taken during the last quarter as genuine.

The Leicestershire analyst examined during last quarter thirty-two samples of sweet spirit of nitre, which was the only drug taken. Two were certified as adulterated.

The Lambeth analyst (Dr. John Muter, F.R.S.E.) in his annual report states that twenty-one samples of drugs were analysed in the course of the year, all of which proved to be genuine.

The Hull city analyst (Mr. A. R. Tankard) states in his annual report that all the twenty-seven samples of drugs examined were genuine and of good quality with the exception of two. The analyst adds that it seems to him a matter for regret that the machinery of the Food and Drugs Act cannot be used for checking the widespread fraud going on in connection with many kinds of proprietary foods and medicines.

The Westminster medical officer reports that the following drugs were examined during the year 1909 : Quinine wine, 10; tincture of quinine, 9; boric ointment, 9; fluid magnesia, 8; and boric acid, 1. In one instance ammoniated tincture of quinine was supplied for ordinary tincture of quinine, while two samples of boric-acid ointment contained an excess of boric acid (17 and 12.5 per cent.), probably due to imperfect mixing with the paraffin ointment base. The attention of the vendor was drawn to the faulty samples. All the other samples were genuine.

The City of London medical officer in his annual report states that drug-adulteration shows a further slight decrease during 1909 to 2.3 per cent., the eighty-six drug-samples taken including the following : Crushed linseed, 11; eucalyptus oil, 8; ammoniated tincture of quinine, 7; light magnesia, 6; saffron, 6; tincture of iodine, 6; liniment of camphor, 6; milk of sulphur, 5; Gregory's powder, 5; liniment of soap, 4; compound liquorice-powder, 4; iron pill, 4; sal volatile, 4; tartaric acid, 3; citric acid, 3; sweet spirit of nitre, 3; and compound tincture of rhubarb, 1. All were genuine except two samples of saffron purchased (one informally) from the same vendor. The official sample was found to contain 17 per cent. of barium sulphate, and the dealer was fined 5*l.*, with 1*l.* 3*s.* 6*d.* expenses.

Disinfection.

The Shoreditch medical officer's annual report shows that 1,103 premises were disinfected during the year as compared with 1,208 in the previous twelve months, while the articles treated at the borough disinfecting station numbered 26,544, against 22,056 in 1908.

The cost of disinfectants for use in the City of London Public Health Department is given in the annual report of the medical officer of health as follows : Deodorising and "denaturalising" condemned meat, disinfecting public conveniences, 12*l.* 0*s.* 4*d.*; disinfecting roadways, street-gullies, etc., 214*l.* 9*s.* 9*d.*; disinfecting premises, etc. (after infectious disease), drain-testing, and sundries, 22*l.* 4*s.* 7*d.*

Midland Notes.

That *avis rara*, an advertisement for an apprentice in the "Birmingham Post," has again appeared, although diligent daily search for many months failed to show its presence until now.

The requirements of the Poisons and Pharmacy Act of 1908 are calling forth much artistic taste locally in the matter of announcement of the qualification of the practising pharmacist, and also in regard to the framing thereof.

An excellent photo of the new infants' schools at Bournville, presented by Mr. and Mrs. George Cadbury at a cost of 50,000*l.*, appears in the "Birmingham News" for Saturday, with the legend, "By O. W. Evans, The Pharmacy, Bournville." This pharmacist is the son of the late Mr. Evans, chemist, Moseley Road, of whose business Mr. J. W. Bland, a former Needhams' manager, is proprietor.

A Pleasant River Trip.

The annual excursion of the employés of Messrs. Potter & Clarke, Ltd., took place on August 13 to Kingston-on-Thames. The morning was spent in visiting Hampton Court Palace and Gardens, Bushey Park, and other places of interest in the neighbourhood. Dinner was served at Messrs. Nuthall's restaurant, and Mr. J. Watmore proposed the toast of the company, to which Mr. R. C. Wren (director) replied, and conveyed messages of greeting he had received from Mr. H. Potter (who is in Montreal), Mr. H. A. Potter, and the staff of the Manchester branch. The party then had a trip on a steam launch, returning for tea, after which they journeyed back to London.

A Chemist's Licence.

The Birkenhead Magistrates on August 10 granted a transfer of the wine-and-spirit licence attached to the pharmacy at 41 Church Road, Higher Tranmere, Birkenhead, to Mr. Thos. Stephen Jones. The application was opposed by the "Vigilance Committee" on the ground that the licence supplied an insidious means for obtaining alcohol. Mr. E. A. Naylor, chemist and druggist, the previous licensee, in reply to a question by Mr. J. E. Thomas, who represented the opposers of the application, said that he did not endorse the opinion of the makers of certain "patented wines" by hanging up placards, and Mr. Naylor added that there are a lot of things which he sold he did not recommend—for instance, arsenic. He admitted under cross-examination that he had taken as much as 27*l.* in one day for wines and spirits alone; while Mr. Jones, in cross-examination, said he had frequently received doctors' orders in the night for "brandy mixture"—a pharmacopeial preparation.

In the Courts.

At Fareham on August 15, William Octavius Smith, chemist, 32 West Street, Fareham, Hants, was charged with unlawfully supplying certain noxious drugs, knowing that the same were intended to be unlawfully used. Superintendent Carman deposed that on July 19 a Mrs. Troke was instructed to go to the prisoner's shop, where she obtained certain drugs which the certificate of the public analyst showed to be noxious in character. Accused was remanded on bail, in the sum of 400*l.*

At the Croydon Police Court on August 15, George Palin (20) was sentenced to three months' imprisonment in the second division for fraudulently obtaining subscriptions to the Boy Scouts' Fund, etc. Among those complaining was Mr. Noble, Selsdon Road, Croydon, joint Secretary of the Croydon Pharmacists' Association, who stated that he parted with a small sum believing the subscription-list to be genuine.

At the Croydon County Court on August 10, Lieut.-Col. the Honourable Herbert Victor Duncombe, D.S.O., of South Norwood, son of the Earl of Feversham, was sued by Mr. A. Moss, chemist and druggist, High Street, South Norwood, son of the Earl of Feversham, was sued in respect of an unpaid account. In reply to the Judge the plaintiff said he believed that the defendant was in receipt of 400*l.* a year from his father. His Honour committed the defendant, but suspended the order during payment of 30s. a month.

Cricket.

Wholesale Chemists' and Druggists' Cricket League.—On August 13 the British Drug Houses' C.C. beat the Allenburys' C.C. by 131 runs for 7 wickets against 27. On the same date the match between Stevenson & Howell's C.C. and Burgoyne's C.C. resulted in a draw. Scores: Stevenson & Howell, 118 runs; Burgoyne's, 66 runs for 4 wickets.

Irish News.

When sending Newspapers containing Trade news to the Editor please mark the items.

Brevities.

Mr. Thomas Kennedy, Ph.C., Ormeau Road, Belfast, has passed the Third Professional examination of the Royal College of Physicians and Surgeons in Ireland.

Mr. J. Stewart Waddell, of Cork, formerly with Mr. Jas. Tate, Ph.C., Royal Avenue, Belfast, has joined the staff of Messrs. Burroughs Wellcome & Co., London.

Damage to the extent of several thousand pounds was done by fire on August 12 at Messrs. Richardson's chemical works, Short Strand, Belfast, which occupy an area of four acres. The fire involved a bag store and adjoining departments containing chemicals. The loss is covered by insurance.

Mr. W. J. Jones, chemist and optician, 82 Quay, Waterford, has published a nicely produced price-list of proprietary articles, druggists' sundries, veterinary medicines, and photographic materials. The first few pages refer to the compounding department, artificial-teeth supply, and sight-testing. Views are also given of the exterior and interior of Mr. Jones's pharmacy.

The quarterly report of the Department of Agriculture and Technical Education contains an alphabetical list of sheep-dips which have been approved by the Department up to June 30 in accordance with the Sheep Scab (Ireland) Order of 1905. The list gives the quantity of water with which each dip has to be diluted for use. One hundred and seventy varieties of ninety-four makers are enumerated.

Guardians' Doings.

The proceedings at Granard Board of Guardians last week show how closely the Local Government Board watches the medicine-contracts. A letter was read from the L.G.B. returning vouchers in support of the claim for recoupment in respect of the cost of the medicines and appliances, and pointing out irregularities that appeared in the file. It was stated that in the case of invoice 14 the certificate was not dated, and that the entry opposite No. 13 should be 5*l.* 17*s.* 5*d.*, instead of 5*l.* 12*s.* 5*d.* A letter was also read from Dr. Keenan, Ballinalee, stating that medicines ordered on July 16 had not reached him by the first week in August, and he did not understand how it took from ten to fourteen days to get the medicines from Ballywillan to Ballinalee. Messrs. Sumner & Co., Liverpool, who are the contractors, wrote that the medicines were sent out immediately after order, and they could not account for the delay. The Chairman said it was a matter between the contractor and the carrier.

Dublin Technical Schools.

Mr. T. W. Russell, of the Department of Agriculture and Technical Instruction, has sent to the Press a copy of a communication which he addressed last March to the Chairman of the City of Dublin Technical Instruction Committee. It is stated that an inquiry should be made into the affairs of the technical schools before any further developments can be sanctioned. A new school is nearing completion in Bolton Street, but no scheme or report of the scope of the subjects to be taught or the equipment to be provided has yet been submitted to the Department for sanction. It is urged that the Bolton Street school should be placed effectively under the administration of an expert director, the Department not regarding the appointment four years ago of an expert adviser as a complete solution of the difficulty. It is also stated that the Secretary has used the title of "principal," as well as that of "secretary and manager," assuming duties which, in the opinion of the Department, he is not properly qualified to perform. The interest to pharmacists in the report from which we have quoted is that the Pharmaceutical Society of Ireland refused some time ago to accept the chemistry certificates of these schools with more reason than appeared at the time.

Scots News.

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Aberdeen.

In the Aberdeen Sheriff Court on August 16, Alfred Swan, 19 Hadden Street, was charged with contravening the Pharmacy Acts. The case was adjourned for proof.

In the "Aberdeen Free Press" of August 13 an interesting account appears of the Deeside kieselguhr industry near Dinnet. The deposit was first discovered in 1876, and it has been worked more or less continuously since. Some fifty hands are now employed.

Our account in last week's issue of the meeting of the Poorhouse Committee of the City Parish Council ended incorrectly. The recommendation of the committee that they invite applications for the post at a salary of 40*l.* per annum was defeated, and not adopted as stated by our correspondent.

Dundee and District.

Business is very quiet in some of the Fife inland towns, a few of those dependent entirely on the custom of the mining community being specially affected, as many miners are only working four or five days a week.

The "Kirkcaldy Times" says that local bee-keepers have some reason to look forward to better honey-harvests from their hives than for some years past. The yield of clover honey has been fairly satisfactory, and the heather blossom on the moors is better than last season.

Edinburgh and District.

Chemists in Goldenacre district have again been closing their premises during the summer on Wednesday afternoons from 2 to 7 P.M.

The report of J. & J. Cunningham, Ltd., for the year ended June 30 last states that there has been a capital expenditure during the year of 6,404*l.* for extensions of the oil-mill in Dundee and additions to the sulphuric acid concentrating plant in Leith. After charging against profits a sum of 7,789*l.* for depreciation, etc., there remains a balance of profit, including the sum brought forward from last year, of 41,948*l.* Of this balance the directors have set aside 10,000*l.* to the general reserve account. They recommend a dividend of 5 per cent. per annum on the ordinary shares, carrying forward 16,948*l.*

Glasgow.

All claims against the late Mr. Wm. Hay, manufacturing chemist and drysalter, 53 Candleriggs, Glasgow, should be lodged with Mr. John W. Douglas, writer, 136 Wellington Street, Glasgow, before August 24.

Mr. W. G. Reidford, chemist and druggist, late of Glasgow and now of Messrs. B. Owen Jones, Ltd., Benoni, Transvaal, sailed from Southampton on the R.M.S. *Briton* on August 13, after completing a three-months' holiday in the Old Country.

Mr. Charles H. S. Chisholm, pharmacist, formerly with Messrs. Thos. Spiers & Co., has left pharmacy in order to enter the stationery and bookselling business. He has succeeded his brother, Mr. Fred H. Chisholm, also a chemist and druggist, in the management of the Hyndland Road branch of Messrs. Moir & Co., stationers, Mr. Fred Chisholm having been promoted to an appointment at headquarters. There are now three brothers with the firm.

Courses of study, including lectures and laboratory instruction, arranged for pharmaceutical students and covering the subjects in the Minor syllabus, begin at the Glasgow and West of Scotland Technical College on September 22. The full course covers three years, but classes can be taken separately. Class fees are 10*s.* to 30*s.* per year, and course fees 2*l.* to 3*l.* 5*s.* per year. Chemistry is under the care of Professor G. G. Henderson, D.Sc., F.I.C., and botany under Dr. David Ellis, F.R.S.E., while Mr. James Grieve, Ph.C., F.C.S., teaches in *materia medica* and pharmacy. Full particulars can be obtained from the Secretary and Director, Technical College, Glasgow.

French News.

(From the "C. & D." Correspondent.)

SECOND-HAND DRESSINGS.—The statement has been made in the "Revue Moderne de Médecine et Chirurgie" that cotton-wool, gauze, lint, etc., which have been used as dressings in German hospitals are imported into France, sorted, washed, and resold. The Admiralty and War Office deny that such abuses can happen in the Navy and Army. The Direction of Public Hygiene, on the contrary, seems to admit the possibility. The industry is stated to flourish near Montpellier.

FOOD-PRESERVATIVES.—The question of food-preservatives and the desirability of their sale by pharmacists was raised at a meeting of the Council of the General Association of French Pharmacists. The opinion of the Council was that though it might be undesirable for the pharmacist to sell these chemicals under the designation of preservatives, there was no reason why he should not effect the sale of chemical products under their legitimate titles, without concerning himself as to their subsequent use.

THE FRENCH WAY.—According to an agreement already entered into, the following letter has been sent by the Alpes-Maritimes Pharmacists' Association to all the pharmacists of Nice: "The Association begs to inform you that as you have given your signature, and the pharmacists of Nice in general have done the same, none of us are to stock or sell from May 12 the following goods, under penalty of a fine of 1,000*f.* (40*l.*): Dragées de Bondonneau, Bain de Sierk, Ouate Thermidor, Dragées de la Reine de Fer, Salubrine, Phénix, Grains de Vals.

RADIUM INSTITUTE.—M. Nenot, the architect of the Sorbonne, and Madame Curie are busy studying the plans of the Radium Institute which will shortly be erected at the corner of the Rue d'Ulm and Rue Nouvelle, Paris. Built on the plans of the London and Vienna radiographic establishments, it will include lecture amphitheatre, laboratories, and a library. A little pavilion, of which the interior will be entirely covered with isolating metallic plates, will be erected apart. Here alone Madame Curie and a few privileged mortals will be allowed to enter, for this will be the "radium storehouse."

NEURASTHENIA REMEDY.—The rumour recently ran round Paris that another attempt had been made to poison an actress. This time Mlle. Flori was named. The truth is that when this charming artiste complained of neurasthenia at a rehearsal, a young sculptor of her acquaintance took two pills from his pocket and swallowed them, saying aloud in her hearing, "Nothing like these bonbons for the nerves." The lady plunged her lily hand into his waistcoat pocket, secured and swallowed a pill. When she arrived home she was so excited that her mother administered a strong dose of castor oil. This was the only "poisoning" she underwent.

A VISIT TO SOUTH AMERICA.—Dr. Pozzi has given to his colleagues at the Paris Academy of Medicine an enthusiastic account of his journey in South America. He operated on a dozen Argentines who, as he humorously says, "no doubt to do honour to French surgery, recovered with charming promptitude." After a long stay in Buenos Ayres he spent a few days in Brazil. At San Paulo the Butantan Serotherapeutic Institute prepares antivenomous serum, and the director, Dr. Brézil, seems to have even improved the excellent methods of Dr. Calmette, of Lille. These serums, it is stated, yearly save the lives of 2,000 or 3,000 agricultural workers bitten by the numerous serpents with which the country is infested.

ASSISTANTS' HOURS.—The agitation continues on the part of the pharmacists' assistants in Paris, with a view to forcing acquiescence in a nine-o'clock closing rule on the two or three pharmacists who still claim their freedom of action in this respect. The Union of Syndicates, as well as the General Confederation of Work, are now seconding the efforts of the assistants. They held a large meeting at the Work Exchange on August 13, and three well-known revolutionary orators exhorted the gathering to persevere in their efforts. They recommend "sabotage," or deterioration of business and stock, as the

strongest and most offensive weapon. They were generous enough, however, to propose that persons who are ill should not come under this ban—that is to say, prescriptions are to be respected. After again voting in favour of the nine-o'clock closing hour, the meeting split up into sections to patrol the city districts in which there are night pharmacies. A mass meeting was called for Wednesday night on the Place de la Chatelet.

MONOPOLY DÉPÔRS.—The Paris Bench appears disposed to protect pharmacists against the “monopoly” broker or salesman, the individual who offers the exclusive sale of a product for a certain district, and, after leaving a large quantity “on sale,” endeavours to obtain payment for his unsold goods. It is, of course, necessary for the pharmacist to prove the bad faith of the “monopolist.” In a case recently reported, the latter had obtained some favourable judgments in the provinces, but the Parisian Courts refused to uphold these decisions. The judgment in the latter case points out that the building which figured on the “monopolist’s” printed matter as the “Sanatoryl” factory really represented a general chemical works near Paris belonging to a third party; that the product in question was not, as represented, able to compete in price with competitive preparations; that one of the prosecutors was a “professional” in this art of the sale of “monopolies,” and that it was highly improbable that a pharmacist in such a small town would promise to purchase—as the prosecutors pretended—such a large quantity of an article except “on sale or return.”

REIGN OF THE REVOLVER.—The revolver has played an unfortunate and frequently tragic part in a good many Parisian quarrels of late, and on August 8 it became the chief argument between a pharmacist and his former assistant. The circumstances of the case are otherwise of an ordinary nature. M. André Lagrange, 27 Rue Julien Lacroix, Paris, sold his pharmacy some time ago to his assistant, M. Jean B. Véron. The conditions of sale were that the latter was to make quarterly payments, which he failed to do, besides which M. Lagrange learned that the business was falling-off, and he therefore notified the buyer that the sale would be cancelled, the conditions not having been carried out. With the object of taking back the pharmacy he presented himself there, but M. Véron would not hear of giving up the business, and a violent quarrel ensued. As the former proprietor insisted on his rights his old assistant fired two revolver-shots, wounding M. Lagrange in the left side. Then the police came in and arrested the all too irascible debtor, while M. Lagrange was able to return home after having his wound dressed at the Tenon Hospital.

IN THE DAYS OF COLUMBUS.—Dr. Paul Dorveaux (the erudite and indefatigable librarian) recently discovered in the library of the Paris Superior School of Pharmacy a copy, made in 1683, of a mediæval document of much earlier epoch. The orthography, etc., indicates the fifteenth century as the probable date of the original manuscript of the “Brokerage Rates on Groceries.” In those days grocers and apothecaries belonged to the same guild; and zedoary, gall-nuts, galanga-root, alkermes, sulphur, borax, ammoniacal salts, madder, orpiment, incense, gum arabic, etc., are included in the list. There are several kinds of indigo—one from Bagdad, another from the Persian Gulf, and a third “de flourée,” which appears to have been prepared from the woad, which formed the only summer costume of our Celtic forefathers. “All alums” pay “vj. d.” (six deniers) per bale. The varieties mostly mentioned in mediæval documents came from Aleppo, Castile, and Vulcano in North Sicily—this last was called “alun de Bolcan.” The old document, republished in pamphlet form, is explained and enriched by copious and interesting footnotes, Dr. Dorveaux having specialised the study of these ancient medicaments, etc.

SOUTH AFRICAN UNION STAMP.—The special postage stamps which are to be issued in commemoration of the Union of South Africa are to be of the value of 2½d., and will be dark blue in colour. The head of King George, framed in an oval, is the central figure, and at the corners are the coats of arms of two of the old Colonies, the Cape and Natal, and the shields of the late Republics of the Transvaal and the Orange Free State.

South African News.

“The Chemist and Druggist” is regularly supplied by order to all the members of the seven Societies and Associations of Chemists in business in British South Africa.

Cape Colony.

UNSTAMPED MEDICINES.—The stringent manner in which the Government is enforcing the Patent Medicine Stamp Act was witnessed at Grahamstown on July 22, the Court-house being described as having the appearance of a wholesale drug-store. Several chemists were fined. The amount imposed in one case was 5*l.* 5*s.*, and in others nominal sums.

Natal.

EXAMINATIONS.—Four candidates failed to satisfy the examiners at the last quarterly Final chemists’ examination held in Maritzburg on July 14. One candidate, Mr. Frank Robinson, was successful.

KYNOCHE’S GLYCERIN FACTORY.—The “Natal Mercury” gives a lengthy and interesting account of this new venture on the Bluff, which has been referred to on several occasions in the *C. & D.* The glycerin, which, it will be remembered, is to be manufactured from whale oil, will be used at their explosives factory at Umbogintwini. The new works cost 25,000*l.* to erect, and is built of timber, walled and roofed with iron, and the plant itself is the best and most up-to-date obtainable. The factory commenced operations on July 12.

Pharmaceutical Society of Cape Colony.

A COUNCIL-MEETING was held at the Society’s rooms, Hout Street, Cape Town, on July 21. Dr. W. Froembling presided, and there were present Messrs. J. Austin Thomas and G. R. Cleghorn (Vice-Presidents), J. Sowden, A. E. A. Tothill, J. Patterson, C. L. Tayler, W. E. Sleggs, J. S. C. Harcus, and H. R. Peck (Hon. Secretary). The minutes of the previous meeting having been read and confirmed, the contentious subject of the sale of poisons by merchants without any restriction was again brought forward by the receipt of a letter from Mr. P. D. Oliver, Grahamstown, pointing out the injustice in towns where there was a sufficient number of chemists to meet the requirements. This matter had been discussed on several occasions; but under the existing laws of the Colony, nothing to remedy the evil could be done. Mr. A. E. A. Tothill, speaking with his usual enthusiasm, thought this was a most opportune time to deal with the subject and press for more stringent laws governing the sale of poisons. He suggested that a letter be drafted to the Pharmacy Board, calling their attention to the unrestricted sale of poisons by others than chemists, and asking the Board to consider the matter, and should there be another conference, to bring it prominently before that meeting. Mr. J. Austin Thomas seconded.—It was unanimously decided, on the proposal of Mr. A. E. A. Tothill, to hold the annual dinner on August 11. The President, Messrs. A. E. A. Tothill, and H. R. Peck are to carry out the necessary arrangements for same. The various committees subsequently met in private.

Pharmaceutical Society of the Transvaal.

At the annual general meeting held at Johannesburg on July 21, Mr. James Johnston presided over a good attendance. In moving the adoption of the annual report, which was published in our issue of August 6, he referred to the gratifying increase in membership and the satisfactory state of the bank balance. After the annual report and balance-sheet had been unanimously adopted, Mr. Johnston declared Mr. A. Macdonald to be elected to the presidential chair for the year 1910-11. In taking the chair, Mr. Macdonald said: “I thank you for the honour you have conferred on me in electing me President of the Pharmaceutical Society of the Transvaal. Although I appreciate this honour, I may tell you I am by no means clamouring for the office, as I felt, and still feel, that I may be keeping someone out of the chair who would fill it with greater credit than myself. Still, some of my colleagues thought that I was entitled to it, and I will do all in my power to uphold the dignity of the Society while your President. I trust that, with the whole-hearted support of the committee, we shall tackle the problems that come before us in a business-like manner. The respect in which the drug-trade of the Transvaal is held to-day, not only by the public, but by the medical profession, is due in no small measure to the united efforts of members of the Society. I am glad to say that the Society is now a power in South Africa. It has never before been so strong numerically, financially, or socially. I would therefore ask that members, whether they be on the committee or not, help me in furthering the

advancement of the Society" (see p. 316). The scrutineers, Messrs. J. Main, W. A. J. Cameron, and S. M. Hendry, handed in the report of the election, which was as follows: Vice-President, Chas. Keir (T. E. Jolly & Co.); Committee: Johannesburg, Jas. Johnston (Johnston & Co.); H. Wheildon (Lennon, Ltd.), A. Purnell (Lennon, Ltd.), J. Christie, A. Rennie, W. Easterbrook; country, B. Owen Jones (Boksburg), E. J. Adcock (Krugersdorp), C. A. Geen (Potchefstroom). R. McGeorge was re-elected Hon. Secretary and Treasurer.

Australasian News.

"The Chemist and Druggist" is regularly supplied by order to all the members of eight Societies of Chemists in Australia and New Zealand.

The Commonwealth.

A.A.A.S.—The Australian Association for the Advancement of Science is to hold its annual meeting in Sydney from January 9 to 14. Dr. Orme Masson, F.R.S., Professor of Chemistry in the Melbourne University, is the President. Pharmacy is a sub-section of Section B, which deals with chemistry, metallurgy, and mineralogy.

New South Wales.

EARLY CLOSING.—On June 3 a deputation from the Council of the Pharmaceutical Society of New South Wales waited on the Hon. J. A. Hogue, Minister of Public Instruction and Labour and Industry, to protest against the closing of pharmacies at 6 p.m. on four days a week, 9 p.m. on one evening, 1 p.m. on Saturday, and all day on Sunday, as advocated by a deputation from the pharmaceutical branch of the Shop Assistants' and Warehouse Employés' Federation of Australia (Sydney) on May 23. The delegation consisted of Messrs. A. Wadsworth (President), Ll. P. Williams (Vice-President), A. Forster (Secretary), H. S. Brothwood, C. J. Carroll, T. M. Snellson, and A. E. Sharpe (members of the Council). The various speakers combated several points which the assistants' deputation had put forward, especially as to the proportion of business transacted after six o'clock. The proportion is, say the chemists, from 40 to 70 per cent., according to the position of the pharmacy. Mr. Hogue promised to carefully consider the arguments and place the matter before his colleagues.

Queensland.

WAGES BOARD PROPOSED.—A petition for a Wages Board had been extensively signed among the shop-assistants and students in Brisbane, but after the meeting between the executive of the Pharmaceutical Society and the Chemists' Assistants' Institute in May, the Secretary of the Institute was instructed to write to the Director of Labour asking for its withdrawal. It has since been rumoured that he has asked if he may recall the withdrawal; but it seems that this is not permitted.

South Australia.

MR. E. F. GRYST, the new President of the Pharmaceutical Society, was born in England, but went to South Australia when quite a child. He was apprenticed to Mr. J. H. Young, Adelaide, and qualified in 1898. A few years later he took over the old-established business (Headings') in Commercial Road. He joined the Pharmaceutical Council in 1904, and has been on all the committees. He is enthusiastic on pharmacy, believing that every pharmacist should be one in fact as well as in name.

Japanese Jottings.

(From the "C. & D." Correspondent.)

KIOTO UNIVERSITY.—It has been decided that a pharmacy course be added to the Science and Engineering College of the Imperial Kioto University next year.

PHARMACY STUDENTS have graduated from the following institutions in this year: University (Tokyo), 15; Chiba Medical College, 25; Sendai Medical College, 15; Kanazawa College, 26; Nagasaki, 22. The total number of new graduates is 103.

BUSINESS AND PLEASURE.—The members of the Japanese-touring party to South America proposed by the Toyo Kisen Kaisha (Oriental Steamship Co., Ltd.), Tokyo, number over 50. The party will visit Hawaii, Mexico, and various States of the South American continent, spending there altogether 130 days. Messrs. B. Owi, M.P., T. Fujisawa, and I. Azumi, well-known Osaka druggists, were to join the party, which was to set out for Hawaii on July 12.

India and the East.

(From the "C. & D." Correspondents.)

INDIAN OPIUM.—There was a large attendance at the third Government opium sale held at Charnock Place, Bombay, on June 1. Altogether 3,300 chests were sold, and the total amount realised was Rs. 71,85,040. This gives an average price of Rs. 2,177 per chest, which is a considerable decrease on the amount realised at the last sale—Rs. 3,082 per chest.

A HARVARD MEDICAL SCHOOL FOR SHANGHAI.—A group of Harvard men, composed of ex-President Elliot, Dean Henry A. Christian, of the Medical School, Mr. Edward B. Drew, retired Commissioner of Chinese Imperial Customs, and others, are now planning for the establishment in Shanghai of a modern medical school, which shall have for its object the instruction of Chinese students in the principles of modern medicine and surgery, and the study—in specially equipped laboratories—of those diseases that vitally affect and threaten the health of the whole world.

A NEW RUBBER COAGULANT, for which the patent specifications of Mr. Martin Hohl, manager of Messrs. Freudenberg & Co., Colombo, have been accepted by the Ceylon Government, is apparently re-distilled pyrolygneous acid obtained in the destructive distillation of wood. The quantity to be mixed with the latex is said to be about six times as much as the acetic acid now used, but the process is stated to have the advantage of disinfecting the latex, producing a product with a faint odour of creosote, thus resembling smoked rubber. If the process is successful, it is said that the importation of acetic acid will no longer be necessary, the crude acid being produced locally.

Colonial and Foreign News.

JAMAICA LOWERS TARIFF.—The following changes in the Customs tariff of Jamaica became effective on July 1: Condensed milk, duty of $\frac{1}{2}d.$ per lb. abolished; oils (other than petroleum), duty reduced from 9d. per gall. to 5d. per gall.; soap, duty reduced from 5s. 6d. per 100 lb. to 2s. 6d. per 100 lb.

A PHARMACY WANTED AT BAGDAD.—France still holds her position as the chief supplier of drugs and medicines to Bagdad. The natives have begun to resort to qualified doctors, and the doctors at Bagdad would probably appreciate the establishment of a pharmacy keeping, of course, nothing but absolutely reliable drugs. There seems, therefore, to be an opening for a European chemist (says the British Consul at Bagdad). Any person opening a pharmacy at Bagdad would require a good knowledge of French, and he would have to procure a Turkish diploma from Constantinople.

DRUG-STORE COMBINE.—An understanding has been reached between the two largest retail drug enterprises in New York, the Hegeman Co. and the William B. Riker & Son Co., by which the companies are to be merged into a corporation to be known as the Riker & Hegeman Co. The new enterprise is to be capitalised at \$15,000,000. The consolidated company intends to expand its business by opening branches in other cities. Mr. John H. Flagler, the president of the Hegeman Co., will head the new enterprise. The first vice-president will be Mr. Alfred H. Cosden, who is now president of the Riker Co.

ARTIFICIAL INDIGO IN CHINA.—An undesirable feature of the trade in artificial indigo which is becoming prominent is persistent adulteration by native dealers in Hankow, in spite

of the introduction of sealed drums with notices pasted on them warning the up-country buyers to insist on the seals being intact. From 10 to 20 per cent. of water or weak impure native indigo continues to be substituted for the genuine dye, and it looks as though this practice were preferred to charging a commission on the unopened drum. The effect on demand may, says the British Consul at Hankow, be serious, and importers are determined to do their utmost to enforce honest trading in a product the imports of which have increased in five years from 1,749 to 15,709 cwt.

PATENT-MEDICINE TAX.—The British Inland Revenue returns giving the amount derived from the patent-medicine stamp-duty have for some time been held temptingly in front of various foreign Ministers of Finance, usually to give this form of taxation a greater degree of justification, backed by the argument that the extra duty levied would be in the interests of the pharmacists. The Hungarian Minister of the Interior has submitted a proposal of this kind to the consideration of the Sanitary Council, and that body has given its opinion that a tax on medicinal specialities in Hungary (10 per cent. is proposed) would be welcome, provided it could be so applied as to prevent a further increase in the production of this class of preparations. Pharmacists have to suffer from the growing tide of specialities, and the proposed tax would not affect them, but cause, on the contrary, an improvement in the returns derived from prescription work. The Sanitary Council urge that not only medicinal specialities but also cosmetic preparations should be taxed.

U.S.A. TARIFF EFFECT.—The manufacturers of Pears' soap in England and importers and handlers of this toilet article in the United States are greatly perturbed, states the "American Druggist," by a decision of the Board of United States General Appraisers at the port of New York on July 8. This body has ruled that Pears' unscented soap is a fancy toilet soap within the meaning of the provision of the Tariff Act, 1909, paragraph 69, which provides for the imposition of a duty of 50 per cent. *ad val.* The importers hitherto have obtained this soap after paying a duty of 20c. per lb. The appraisers' decision was rendered when the Board overruled a protest filed by R. F. Downing & Co., New York City. Counsel for the importers showed from the Congressional Conference report that the only change made by the House of Representatives last summer in paragraph 72 of the Act of 1897 was the substitution of "20 cents per pound" for "15 cents per pound" for fancy perfumed and all descriptions of toilet soaps, including the so-called medicinal or medicated soap; and that the Senate merely separated medicinal or medicated soap from toilet soaps, leaving the rate as fixed by the House at 20c. per lb. on medicinal or medicated soaps.

ITALIAN MEDICAL ACT.—The "British Medical Journal" gives some notes on a translation of the Italian Medical Act published by "La Semaine Médicale," and adds some details in relation to foreign practitioners. The Act establishes provincial registers for the orders of the medical profession, veterinary surgeons, and pharmacists, and prohibits practice in these departments to all unregistered persons. Each registered person must pay an annual fee of 1L, and each order is empowered to elect a provincial council consisting of five or seven members, according to the number of the registered persons in each order in the province. Each council elects a president, and a representative of each of the three orders elected by and from among the presidents will have a seat on the Supreme Council of Health. The provincial council will have the duty not only of keeping a register, but of maintaining discipline and settling disputes between registered persons or registered persons and their clients; but decisions of the councils are to be subject to appeal to a general assembly of the order, and this again to appeal to the Supreme Council of Health. Foreigners enjoying civil rights and possessing diplomas giving them the right to practise in countries which offer reciprocity of an equal kind to Italians are eligible for registration, but a further exception is made in favour of those practitioners who have paid rates and taxes for the last three years, they being allowed to continue to practise amongst foreign residents.

Patent Specifications.

Printed copies of the following specifications are on sale (8d. each) at the Patent Office, 25 Southampton Buildings, London, W.C., a fortnight after the notice or acceptance has appeared in the "Official Journal" (Patents) of the given dates. Persons desirous of opposing the grant of a patent must do so in the prescribed form within two months from the date of the "Journal" in which the notice appeared.

Specifications Accepted.

July 6, 1910.

HYDROCYANIC ACID FROM METALLIC CYANIDES. 12226/09. Feld. *m*-CRESOL-*o*-OXALIC ACID ESTER. 14805/09. Wetter. (Rutgerswerke Akt. Ges.)

CLEANSING AND POLISHING LIQUID. 14880/09. Zambuhl & Hall.

ROTARY MACHINE FOR EXTRACTING ESSENTIAL OILS FROM LEMONS, ETC. 15552/09. Rose & Siddall.

CAPSULING BOTTLES. 16322/09. Smith.

m-AMINOBENZALDEHYDE AND ITS SALTS. 22393/09. Newton. (Farbenfabriken vorm. F. Bayer & Co.)

β -METHYLADIPIC ACID. 24298/09. Newton. (Farbenfabriken vorm. F. Bayer & Co.)

TOOTH-BRUSHES. 27088/09. Langh.

TONGUE DEPRESSORS. 27959/09. Kiss.

AMMONIA MANUFACTURE. 30380/09. Johnson. (Badische Anilin & Soda Fabrik.)

SURGICAL NEEDLES. 8095/10. Kratz.

July 13, 1910.

SENSITISED ALBUMENISED PAPER. 17324/09. Hollingsworth. KETONE ALCOHOLS. 19087/09. Newton. (Farbenfabriken vorm. F. Bayer & Co.)

CONCENTRATING SOLUTIONS WITHOUT HEAT. 20380/09. Farago. ALIPHATIC HYDROCARBONS. 8100/10. Farbenfabriken vorm. F. Bayer & Co.

CONCENTRATED FORMIC ACID. 8438/10. Imray. (Soc. of Chemical Industry in Baste.)

CONVERTING CALCIUM CYANAMIDE INTO NITRATE OF LIME. 10815/10. Collett & Eckhardt.

ANHYDROUS SODIUM HYDROSULPHATE. 11906/10. Leopold Cassella & Co. Ges.

July 20, 1910.

FABRIC FOR CLEANSING AND POLISHING METALS. 16352/09. Stöne.

OPERATING-TABLES. 16426/09. Hotchkin.

BLEACHING AND PURIFYING FATS AND OILS. 18236/09. Tuckfield & Garland.

SOLID HYDROCARBON SOAP. 23013/09. Böhme & Wolf.

INCUBATING SOUR MILK. 24586/09. Buller.

SULPHURIC-ACID APPARATUS. 26452/09. Falding.

p-AMINOPHENYLARSONIC ACID. 28361/10. Bloxam. (Akt. Ges. für Anilin-Fabrikation.)

ARTIFICIAL HONEY. 28724/09. Wolf.

BIFOCAL SPECTACLE GLASSES. 891/10. Zeiss.

NITROGEN FROM THE AIR. 7175/10. Société l'Air Liquide.

ENCLOSING POWDERS IN PAPER CAPSULES. 14594/10. Krieger & Biechy.

July 27, 1910.

PHOTOGRAPHIC SHOWCARDS. 3244/09. George & Natkiel.

ACETYL DERIVATIVES OF THE ALKALYLATED IMINOPYRIMIDINES AND OF THE ALKYL-BARBITURIC ACIDS DERIVED THEREFROM. 16721/09. Zinnumermann. (Chemische Fabrik auf Actien vorm. E. Schering.)

SOOTHERS FOR INFANTS. 23116/09. Shirley Bros., Ltd. & Kay.

TOOTH-BRUSHES. 26688/09. Medcraft & Ensom.

PRODUCING BANDAGES. 1706/10. Roscheisen.

SEALING AIR-FILLED SOOTHERS. 5781/10. Walsh & Kay.

Specifications Open to Public Inspection before Acceptance.

RÖNTGEN-RAY APPLIANCE. 13765/10. Siemens & Halske Akt. Ges.

ENCLOSING POWDERS IN CAPSULES. 14594/10. Krieger & Biechy.

DISINFECTANT. 23230/09. Geb. Hcyl & Co.

PREPARING AMMONIUM SULPHITE OR SULPHATE. 15877/10. Burkheiser.

PRODUCTION OF HYDROGEN. 7718/10. Dieffenbach & Moldenhauer.

MANUFACTURE OF ALKALINE NITRATES. 15525/10. Guye & Darier.

TREATING LEMON-JUICE. 15959/10. Fernbach.

MANUFACTURE OF NITRIDES. 16368/10. Badische Anilin & Soda Fabrik.

LIQUEFYING HYDROGEN. 16615/09. Heylandt Ges.

Brussels Exhibition.

WE described in the Summer Number the British exhibits in the Chemical and Pharmaceutical Section.

Other British Exhibits

are in the sections devoted to scientific instruments, photography, foods and beverages. The following notes indicate the chief features of these exhibits :

Scientific Apparatus.

BAIRD & TATLOCK (LONDON), LTD., 14 Cross Street, Hatton Garden, London, E.C., have a selection of apparatus for use in chemistry, bacteriology, physics, and physiology; also apparatus employed in mineral-oil testing. The last-named consists of Abel's, Abel-Pensky's, Pensky-Marten's and Gray's flash-point apparatus, and Wilson's chronometer for judging the colours of burning oils. A machine for mixing animal lymph and Entrican's lymph-filler are shown. A useful form of hand centrifuge and Milner's high-vacuum pump may be also mentioned as useful apparatus for a pharmacist's laboratory.

The CAMBRIDGE SCIENTIFIC INSTRUMENT CO., LTD., Cambridge, exhibit some fine pieces of workmanship in temperature controlling and recording instruments. The delicacy of one of the recorders can be demonstrated by visitors, as by touching a wire fixed on the outside of the case the variation in the temperature is shown on a recording instrument inside. We noted a special appliance for the continuous registration of the axillary temperature, some charts being shown. Several kinds of galvanometer are exhibited.

FRANCIS DARTON & CO., 142 St. John Street, London, E.C., shows barometers, thermometers, and standard instruments for observatories. The dials of the barometers have wording in French. Meteorological instruments, such as anemometers and rainfall gauges, are also shown.

DOWN BROS., LTD., St. Thomas's Street, London, S.E., have a very large exhibit of surgical instruments, and publish a special catalogue of the articles shown. Antiseptic furniture for operating-rooms is included. The exhibit comprises nearly every modern appliance known to English surgery.

M. W. DUNSCOMBE, LTD., St. Augustine's Parade, Bristol, have an historical exhibit of spectacles, some of which were shown at the Great Exhibition in London, 1851. The series ranges from ancient Chinese spectacles to the modern Kryptok lenses.

FLETCHER, RUSSELL & CO., LTD., Warrington, exhibit gas and oil laboratory appliances, also dental materials. Sterilising-apparatus and various forms of Bunsen burners are of pharmaceutical interest. The dental goods include carbolised resin, enamels, and amalgam.

WILLIAM GOWLAND, LTD., Croydon, exhibit optical instruments used in sight-testing. A Sutcliffe's keratometer occupies the central position, and around it may be found keratometers, perimeters, scotometers, ophthalmoscopes, retinoscopes, laryngoscopes, trial frames and cases, and lens-measures. Edridge Green's colour-perception lamp and Steven's phorometer are also exhibited.

JOHN J. GRIFFIN & SONS, LTD., Kingsway, London, W.C., have a good selection of their specialities in scientific apparatus. There are shown Professor Boys's gas calorimeter, and the Mahler-Cook bomb calorimeter, Lewis Thompson's calorimeter, Rutherford's electroscope for measuring radio-activity, Tucker's 1,000-volt primary battery, Young's still-heads, Harcourt's chloroform-inhaler, Sir Boerton Redwood's viscosimeter, the Lucas safety pipette, Struther's syphon pipette, and Vitro ink for writing on glass.

ADAM HILGER, LTD., Camden Road, London, N.W., exhibit a large Echelon diffraction grating of fifty-six plates, Fabry & Perot's interferometer, and a Hilger wave-length spectrometer arranged for use with various accessories for high-resolving power.

NEGRETTI & ZAMBRA, Holborn Viaduct, London, E.C., show barometers, thermometers, telescopes, and microscopes.

J. PILLISCHER, 88 New Bond Street, London, W., has on view microscopes, telescopes, a sight-testing case, and clinical thermometers.

THE REFLECTOR SYNDICATE, LTD., 82 Victoria Street, London, S.W., show glass and electro-deposited metallic mirrors. In one variety, non-tarnishable, palladium is employed, and there are samples of translucent gold deposits on glass.

W. F. STANLEY & CO., LTD., Great Turnstile, Holborn, London, W.C., show, among other instruments, refractometers for water and oil, and for solids.

J. H. STEWARD, 406 and 457 Strand, London, W.C., has a fine astronomical refracting telescope in the centre of his exhibit. Other instruments shown are a "hyposometric" aneroid, a heliograph, telemeters, and sextants.

JAMES SWIFT & SON, 81 Tottenham Court Road, London, W., shows microscopes.

TINTOMETER, LTD., Salisbury, exhibit Lovibond's tintometer, which has so many uses in industrial chemistry wherever it is required to establish colour standards. We note also a haemoglobinometer.

TOWNSON & MERCER, 34 Camomile Street, London, E.C.—This exhibit contains some useful forms of chemical apparatus, many of registered design. Some of these are of particular interest, such as Chamberland's autoclave, for sterilising under pressure of three atmospheres, Koch's steam steriliser, a vacuum drying-apparatus, Tate's sp. gr. bottle, and two forms of spectrometer.

The Photographic Section.

ILFORD, LTD., Ilford, London.—This exhibit is on the bridge connecting the British and French Sections. The walls of the alcove are covered with examples of the various papers manufactured by the Company, and the photographer, both professional and amateur, must be hard indeed to please if he cannot satisfy his requirements from this *embarras des riches*. Lantern-plates, for which the company has always had a high reputation, are shown as transparencies in the three varieties, "Special," "Alpha," and "Gaslight." The well-known



isochromatic screens are on view, and also the dark-room light-filters. The latter are admirably shown in an illuminated triple lamp. Many of the framed photographs have excited the envy of the visitors, and could have been sold if desired, but at the exhibition the policy of the company is, as it has always been, "each one to his trade," and although there are shown packets of paper and boxes of plates, would-be purchasers are informed that these are *vide*, and are referred to messieurs the dealers. Excellent brochures and catalogues are distributed to encourage success, and "Ilford Every Day Book" is in great request under the happily translated title of the "Règles d'Or pour le Photographe."

JOHNSON & SONS, LTD., Cross Street, Finsbury, London, E.C., are showing in this section. There are the familiar dishes of gold chloride and potassium chloroplatinate which excite the wonder and envy of passers-by. "Scales" brand photographic preparations, "scaloids," compressed photographic tablets, and Azol developer are also shown.

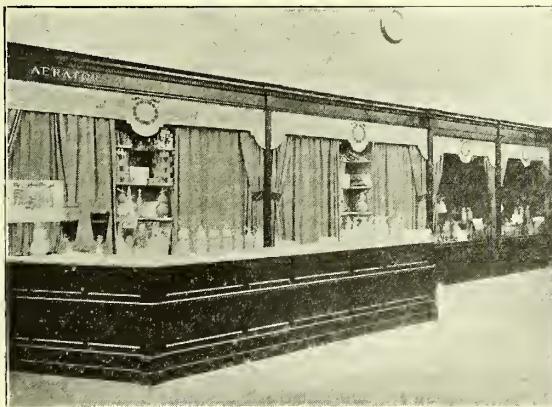
THE PLATINOTYPE Co., 22 Bloomsbury Street, London, W.C., have two spaces, and are giving demonstrations of the printing and developing of platinotype paper. These, awaking the curiosity, attract a large number of people.

VALENTINE & SONS (1907), LTD., Dundee, have the concession for the sale of photographs, and their kiosks are familiar objects in the grounds. They have a stand in the British photographic section.

WELLINGTON & WARD, Elstree, London, show photographic results obtained by using the Wellington plates and paper, and are distributing literature in French regarding their specialities.

Foods and Beverages.

AERATORS, LIMITED, Upper Edmonton, London, N., have a prominent position in the Food Products section. There is also a bar where one may obtain a *dégustation de sirops à l'eau gazeuse* for 20c. The aërated water is



made by the Aerator method, and the syrups are also special to the company. Among the sparklet syphons shown is one covered with felt for hot climates; it is kept wet, and the evaporation keeps down the temperature of the contents.

BOVRIL, LTD., Old Street, London, E.C., have a pretty building in the grounds, where cups of bovril may be had.

CEREBOS, LTD., Greatham, show cerebos salt. Sample packets and 6d. salt-holders are being sold at the stall.

CHIVERS & SONS, LTD., Heston, Cambridge, show among bottled fruits and jams the Cambridge lemonade, which is free from added acid.

COLEMAN & Co., LTD., Norwich, have an octagon stand filled with Wincarnis, labelled in French and English.

IDRIS & Co., LTD., Pratt Street, Camden Town, London, N.W., have a bright display of the various aërated waters manufactured by the company. The Royal arms are in the centre. There are also shown fruit-syrups and lime-juice.

LIEBIG'S EXTRACT OF MEAT Co., LTD., 4 Lloyd's Avenue, London, E.C., have a special kiosk in the grounds, where visitors may obtain cups of Oxo and see the other products of the company—Lemco, Bifti, Nursing Oxo, etc.

JOHN MACKINTOSH, LTD., Halifax, show English toffees.

MELLIN'S FOOD, LTD., Peckham, London, S.E., show Mellin's food, which figures as "Aliment Mellin." There is an analytical comparison of the composition of human milk and Mellin's food. Lacto is also shown, and Mellin's biscuits and baby scales.

SAVORY & MOORE, LTD., 143 New Bond Street, London, W., exhibit in the Food section. The case contains samples of Savory & Moore's food, Savore, peptonised milk, peptonised cocoa and milk, Café Zylak, and pancreatic emulsion. There are also shown various pharmaceutical specialities, including ophthalmic discs, peppermint drops, granules and rods, effervescent granules, Fructole (a chemical food), Dr. Jenner's abortent lozenges, datuva tatula (for asthma), etherodyne (chlorodyne substitute), "The Patent Seidlitz Powders"

(invented about the year of the battle of Waterloo), and a selection of medicine-chests.

SPRATT'S PATENT, LTD., 24 and 25 Fenchurch Street, London, E.C., show various foods for animals and birds. Here may be seen Phedo, Pulto, Covertina (for pheasants), Rodnim (for dogs), Laymor (for poultry), Crissel (for poultry), Chikko, malt milk, Fibo, pepsinated puppy-meal, and veterinary medicines.

MISCELLANEOUS.

E. BREFFIT & Co., LTD., Castleford, Yorkshire, have a good display of bottles, chiefly for aërated waters and beer. The company have an agent in Antwerp.

KILNER BROS., LTD., King's Cross, London, N., show



KILNER BROS.' EXHIBIT.

mineral-water and beer bottles in great variety. They have an agent at Laeken.

SISSENS BROTHERS & Co., LTD., Hull, demonstrate in their exhibit the possibilities of decoration with Hall's distemper, sold on the Continent as "Matolin." The exhibit takes the form of a model of a house, various parts being treated with Matolin, Aperfector paint, Rustikol, Sisco enamel, and Orientolac enamel.

Fire at the Exhibition.

Since the above was written the most important part of the Exhibition has been destroyed by fire. On Sunday night, August 14, owing, it is suggested, to a careless smoker or to the short-circuiting of some of the electric wires connected with an illuminated device over the main entrance, the roof caught fire. Just inside the main entrance there are exhibits in the Belgian Palace of artificial silk and other light fabrics, and these catching fire, the flames spread with great rapidity. The British Section, which is next to the Belgian exhibits, was soon involved, and in but a short time the whole of the costly and beautiful exhibits in this section were destroyed. The papers in the British Commissioner's office, which is situated under the bridge at the far end of the section, were rescued by Mr. Keighley Snowden and other members of the staff, and one piece of tapestry and three cases of jewellery were saved, but beyond that everything has been burnt. The fire involved the adjoining French Section, and many of the Italian exhibits are injured by water or hurried removal. The fire broke out at nine o'clock, some three hours after the buildings are closed for the evening, but the grounds were crowded with visitors, as is usual on Sundays, and many

people were severely injured in the disorder which prevailed. Altogether the fire swept over 37 acres, and more than half of the Exhibition has succumbed to the flames. It is stated that the Exhibition will still remain open, an architect having already begun a scheme of decoration with the object of hiding the ravages of the flames in the Belgian and British Sections. The loss in the British Section alone is estimated at two million pounds; but the unique character of the exhibits makes it difficult to give exact figures in this case. The General Regulations for British exhibitors contain a stipulation that "every exhibitor shows at his own risk in every respect," and it is believed that insurance had been effected by most of the exhibitors.

In several accounts of the fire it is stated that all the documents of the International Judging Committee have been destroyed, and this may delay the publication of the awards or even render this step impossible. The exhibits had all been inspected by the Class Juries a fortnight ago, but the recommendations had to be submitted to the Grand Juries before the awards became official. The exceptional merit of the British exhibits had secured for the section a very large proportion of the higher awards, and it is to be hoped that these may still be ratified. The doubts as to the proposed awards have since been set at rest by a communication from Lord Lytton, Chairman of the Exhibitions Commission, in which he states that "it is most fortunate that the labours of the Class Juries, who had recommended many Grands Prix in the British Section, will not be made abortive by the fire. Duplicates of their proposed awards were among the papers saved from the offices of the Belgian executive. The only effect, so far as these awards are concerned, will be a little delay. The Grand Juries which confirm them were to have met on August 22, but they will not now be called together until the end of the month."

William the Porter.

His Philosophisings as recorded by Bruce Logan.

VIII.

"AY! ay! sir, there be sellers an' sellers," said William, while checking off a large order by means of the dispatch note in his hand.

"Some men take as naturally to selling as some do to drinking. But then, ye know, I've met men as was too good at selling to do much good to t' business."

"Ye can't see how that can be? Oh! but it's Gospel truth is that. Ay, for ye mustn't forget that keeping customers be just as important as making sales is."

"An' what's more, it don't be a mighty clever thing to sell a man something as he doesn't want, 'cause he's likely to get annoyed about it later when it comes to counting up his savings on a Saturday. Ay, and that's just t' sort o' thing as sticks in a body's head."

"Ah! an' that's where th' art be, sir—knowing when to stop. There do be folks, ye know, as 'll buy so long as tale is nicely told, and then repent a big bit afterwards. Ay, an' then they've a kind of fear o' going into t' same shop again 'cause they remember what it cost them last time."

"Oh! but it's a fact as is often overlooked that many times it's better to have a small sale and make a good customer than it be to make a big sale an' frighten a customer away."

"Ay, sir—tact, that's just what's wanted. In fact, ye might say what makes a good seller is tact an' energy. Ay! an' they must be in t' right proportions too, like th' ingredients of a good emulsion, as it were."

"If a seller has all tact an' no force, there be a lot o' talk an' terr'bly few sales; and if he's too much force an' too little tact, then, though it be possible as he'll make sales all right, he's terr'bly apt to lose customers."

"Just so, sir!—sell good stuff as is worth talking about an' try to oblige everybody. But don't be like th' apprentice we once had as was that anxious to oblige that he was wanting to sell a stick o' liquorice to a customer 'cause she complained as liquorice powder was not strong enough."

Trade Notes.

DR. DAVIES' INSTEP SUPPORT is advertised in this issue by the Spring Arch Support Co., Ltd., 382 Hackney Road, London, E. This is an appliance for curing flatfoot, and is particularly adapted for sale by chemists.

MR. P. HOLZMULLER, of Messrs. Holzmuller & Schmidt, 13 Rue de Sevigne, Paris, announces in our advertisement pages that he is prepared to represent other firms in an eight months' tour he is making in the Far East.

CASH TRADE is sometimes encouraged by the offer of a rebate or bonus on purchases. The National Cash Register Co., Ltd., 225 Tottenham Court Road, London, W., claim that their cash-registers are particularly adapted for this form of trade stimulation.

FLY-CATCHING.—The spell of warm weather which is now being experienced should cause a demand for fly-catching specialities. Messrs. Kay Brothers, Ltd., Stockport, remind us that the "Vampire," "Flysac," and "Viper" fly-catchers of their manufacture practically cover the varieties of these goods and are, moreover, of tried excellence.

HOLIDAY COMPETITION.—Messrs. Wright, Layman & Umney, Ltd., proprietors of Wright's Coal-tar Soap, Southwark, S.E., ask us to inform our readers that their offer in connection with the holiday competition is of limited duration. On this account it is advisable to obtain a supply of the view-books at an early date. Particulars are given in our advertisement pages.

DENTAL EXHIBITION.—The International Dental Exhibition in connection with the Annual Conference of the Incorporated Society of Adaptors of Teeth is to be held at the Royal Horticultural Hall on September 5 to 9 inclusive. Each day there are to be demonstrations of operative and prosthetic dental manipulations provided by exhibitors. Invitation cards for the Exhibition can be had by chemist-extractors who apply to the offices of the Society, Clarence Chambers, Piccadilly, Manchester, before August 30, or who present their business card at the Exhibition.

ODOL ADVERTISEMENT.—The Odol Chemical Works, Park Street, Southwark, London, S.E., are extending the use of the Odol delivery-cars, which are familiar objects



in London. The travellers of the company are now using the carts on the South Coast, Bournemouth being the town where the annexed photograph was taken. A definite scheme of town-to-town visits is in progress.

A NOTIFICATION has been issued by the Amoy Customs prohibiting the importation of cocaine and accessories into the port. As an extensive business is done in the drug in Amoy, this prohibition will affect a number of firms, foreign and Chinese. The drug is imported and then re-exported to Singapore, Rangoon, and India, where the demand is very great.

Legal Reports.

Trade Law.

Telephone Contracts.—In the City of London Court on August 17, Messrs. Nettleton & Morris, merchants, Colonial Avenue, E.C., sued Mr. James Price, of Sydenham Road, before Judge Lumley Smith, for ten guineas damages for failure to accept goods. The plaintiffs' case was that the defendant ordered through the telephone a ton of goods, half to be sent at once and the other half three months later. They confirmed the telephone conversation by letter, and sent a contract which the defendant did not return and did not repudiate. The defendant's case was that he repudiated the alleged contract for the second half-ton by telephone. Judge Lumley Smith said that the defendant ought not to have relied on the telephone denial. No wise man of business, if a letter was written to him and he disputed its accuracy, would content himself with sending a telephone message. Judgment was given for the plaintiffs, with costs.

Pharmacy Act, 1868.

SECTION 15 CASE.

At the Whitechapel County Court on August 12, the case of the Pharmaceutical Society *v.* the Cheapest Cash Chemist, Ltd., came on for hearing before Judge Bacon. The Society was represented by Mr. W. S. Glyn-Jones (instructed by Messrs. Flux, Thompson & Quarrell). Mr. Glyn-Jones explained that the action was brought by the Society to recover the sum of 5*l.* incurred by the defendants on June 28 for carrying on the business of a chemist and druggist, the same not being conducted by a duly registered manager, and the name and certificate of the manager not being exhibited. Defendants' shop at 583 Commercial Road, London, E., was visited by Mr. Waldock, an agent for the Society, on June 28, 29, and 30, and on July 2. On those days the person in charge was Mr. F. Sutton. A purchase made by Mr. Waldock bore a label with the words "Cash Chemist" thereon. In the shop was exhibited, but in an out-of-the-way position, the certificate of a chemist. Mr. Glyn-Jones pointed out that the company was registered in May 1905 with a nominal capital of 185*l.*, divided into 185 shares of 1*l.* Of these 100 were held by Mr. F. Sutton, and Mr. F. Bute, described as a chemist's assistant, held fifty shares.

In reply to the Judge, Mr. Sutton said he appeared for the company.

Mr. Waldock then went into the witness-box. On June 28 he purchased olive oil at the shop. The name "Cheapest Cash Chemists" was on the label and on the premises, "Butes, Chemist," was on the lamp and sun-blind, and "Central Hall Pharmacy" on the fanlight. There was a certificate hanging in the shop. On a subsequent visit he asked for Mr. Kerr, whose name was on the certificate, but was told he was out, but "might pop in at any time." Mr. J. F. Sutton served him each time he visited the shop. The next witness, Mr. Thompson, gave evidence that he had searched at Somerset House and found that the company was formed to acquire the business of Bute's Drug-stores.

Mr. Sutton, for the defence, was examined by Mr. Glyn-Jones. He said he was not a chemist. He held 100 shares in the company and Mr. Francis Bute fifty shares. It is a private company, and there are no minute books. At a directors' meeting it had been agreed to sell the business. Mr. Glyn-Jones asked several questions as to the company, and suggested that the company was got up to evade the Pharmacy Act. Mr. Sutton further said that the agreement was made on June 30 and came into operation five days before.

At this stage the case was adjourned.

Pharmacy Act (Ireland), 1875, and Sale of Poisons (Ireland) Act, 1870.

SALE OF POISON BY UNQUALIFIED PERSON.

At the Petty Sessions, Donadca, co. Kildare, on August 16, the Pharmaceutical Society of Ireland prosecuted C. P. Buckley, shopkeeper, Kilcock, for contravening the Pharmacy Act (Ireland), 1875, and Sale of Poisons (Ireland) Act, 1870. There were three sum-

monses under each Act. The offences were keeping open shop for retailing or dispensing of poisons and selling poison—to wit, aconitine and emetic tartar contained in Harvey's aconite powders, and corrosive sublimate and oxalic acid. Summons were also issued against Luke Mannix, Buckley's assistant. The Magistrates who adjudicated were Major M. Thackeray, R.M., Mr. John Field, J.P., Mr. Francis Colgan, J.P., Major A. E. Aylmer, D.L., J.P., and Mr. W. C. Coates.

Mr. Wm. Campbell Meeke, solicitor (of Messrs. A. & J. Robinson), prosecuted on behalf of the Pharmaceutical Society. Mr. Buckley appeared in person; his assistant did not appear.

Mr. Buckley said that Mr. Mannix is not now in his employ; he is in the South of Ireland. Copies of the summons against Mr. Mannix were left at his (Mr. Buckley's) house, but he did not forward them on.

Mr. Meeke said they did not want to bother about the assistant. He was afraid the summonses were not good service. Continuing, Mr. Meeke said there were six charges against Mr. Buckley, and they all related to offences committed on May 6. From information received his clients were led to understand that Mr. Buckley was dealing in poisonous substances contrary to the Pharmacy Act and the Poisons Act. On that information the Pharmaceutical Society communicated with the Inspector-General of the Royal Irish Constabulary, who authorised Sergeant Dufficy to procure evidence to support a prosecution. With that object the sergeant went to Mr. Buckley's shop in Kilcock.—Major Thackeray: Is not a chemist's shop?—Mr. Meeke: It is not. It is an ordinary country shop, where liquor, hardware, groceries, and so forth are sold. The sergeant obtained 1 oz. of oxalic acid, $\frac{1}{2}$ oz. of corrosive sublimate, and a packet of Harvey's aconite horse-powders. Oxalic acid and corrosive sublimate are scheduled poisons, and Harvey's aconite powders contain aconitine and emetic tartar, both scheduled poisons. Those articles were sent by the sergeant to Mr. Thorpe, public analyst, who found the packet of oxalic acid to contain 575.12 grains of the acid, of which 10 grains is a dangerous dose. The packet of Harvey's aconite horse-powders yielded $1\frac{1}{2}$ grains of aconitine; $\frac{1}{20}$ grain is a fatal dose, so that the small quantity in the packet was sufficient to poison some thirty people. Mr. Thorpe also found in the powder 5 per cent. of emetic tartar, which is a dangerous poison. The packet of corrosive sublimate contained 217.6 grains; half a grain is a highly dangerous dose, and the whole quantity is sufficient to poison from 300 to 500 people.

Major Thackeray: I wonder that there is anybody left alive in Kilcock.

Mr. Meeke: I remember, in connection with one of these cases in Dungarvan, I held in my hand poison sufficient to kill the whole town twice over, and it was contained in an ordinary whisky-bottle without any label. Proceeding, Mr. Meeke said that Sergeant Dufficy learned from Mr. Buckley's assistants that there was no poison-book kept. The poisons which he had purchased had not Mr. Buckley's name and address as required by the Poisons Act. Mr. Meeke then read the various sections of the Acts under which the prosecutions were taken.

Sergeant Maurice Dufficy, R.I.C., the first witness, stated that he visited the defendant's shop on May 6.

Defendant: It may simplify matters if I plead guilty.

Mr. Meeke said that so far as the fine is concerned it is fixed at 5*l.* for an offence under the Pharmacy Act, and in the case of the Sale of Poisons Act it is not to exceed 5*l.* He suggested that he might examine the sergeant as to the conversation about the poison-register.

Defendant: I admit I have no register.

Mr. Meeke: Then I suppose I need not put the case further.

Mr. Field suggested that it would suffice if they imposed a penalty under one of the summonses.

Major Thackeray said it was unnecessary to examine the analyst as the defendant admitted the offence.

Mr. Meeke said there were three summonses under the Pharmacy Act, and he was prepared to take a conviction on one of them, as it was one continuous offence. His instructions were that these cases were to be pressed to

their extreme limit, but that they not to be pressed unfairly. This was a very bad case.

Major Thackeray: We cannot take up the papers any day of the week without seeing some fellow poisoning himself; and the way they get the poison is extremely easy.

Mr. Meeke: During the time I have represented the Pharmaceutical Society I must have had hundreds of these prosecutions through my hands.

The Magistrates unanimously decided to fine the defendant 5*l.* on the summons under the Pharmacy Act and to allow 1*l.* costs, one-third of the 5*l.* to go to Sergeant Duffy and two-thirds to the Pharmaceutical Society.

Mr. Meeke, referring to the question of costs, said that unfortunately the Pharmaceutical Society had to bear the costs of the prosecution, and he could not estimate these at less than 15*l.* in the present case.

After some further discussion, Mr. Meeke also agreed to withdraw two of the summonses under the Sale of Poisons Act, and on the remaining summons a majority of the Magistrates decided to fine the defendant 2*s.* 6*d.*, and to allow 10*s.* costs.

Sale of Food and Drugs Acts.

LIME-WATER.

At the North London Police Court on August 12, Mr. John Dwyer, chemist and druggist, 128 Ball's Pond Road, Islington, London, N., was summoned before Mr. Hedderwick for selling on June 28 lime-water deficient in strength. Mr. A. M. Bramall, who prosecuted on behalf of the Islington Borough Council, proved the purchase of the sample, and stated that the certificate of analysis from Dr. F. L. Teed showed that the sample contained lime, 0.0952 per cent.; water, 99.9048 per cent. Lime-water, or liquor calcis, should contain 0.117 per cent. of lime; therefore, in the case in question, the lime was deficient to the extent of 18.6 per cent. Lime-water had a Pharmacopœia standard, and at the best there was very little lime in it.—Mr. Kirby, who defended, said that lime-water was an article which, however carefully kept, was liable to deterioration, and that was his defence in this case. In the course of a quotation from the Pharmacopœia Mr. Kirby mentioned that lime-water should be stored in a green bottle.—Mr. Hedderwick: Anything in the colour of the bottle?—Mr. Kirby: The idea is to keep light and air from lime-water. In the course of further argument Mr. Kirby said that although the Pharmacopœia was recognised as the standard for making drugs, it was not set up as the standard for the sale of drugs.—Mr. Hedderwick: You open a wide door. Under such circumstances there would be no case brought home to the adulterator.—Mr. Kirby said that defendant having taken reasonable care to keep the article according to the standard of the Pharmacopœia, and the deficiency in strength being due to natural deterioration, he was not guilty of an offence.—Defendant, on oath, said he bought this lime-water from a high-class firm, and when it arrived at his shop he kept it in a stone bottle in a dark, cool place. He thought such a bottle would be better than a green-glass one, as it would admit no light. The stone bottle had a strong, long cork. For the purpose of serving customers he put some of the lime-water in the ordinary white stoppered bottle holding about two pints, which he kept in the shop. He was aware that every time the stopper was taken from this bottle a small quantity of carbonic acid got into it and precipitated the lime in solution.—Mr. Hedderwick: A syphon might be used.—Defendant, continuing, said he had done absolutely nothing to this lime-water, selling it in the same state as he received it, and had taken the greatest possible care with it.—Cross-examined: He filled the shop-bottle every two or three weeks. On the occasion in question the bottle was three-parts full. He had this stock in from the wholesale house three months ago.—Mr. Robert Benjamin Cocker, retired chemist, of Mildmay Park, N., said defendant kept lime-water in exactly the same way that it was kept in every chemist's shop in Great Britain.—Mr. Hedderwick: So far as you know. (Laughter.)—Mr. Hedderwick, in delivering judgment, said defendant's mode of keeping this lime-water was not sufficient. He would regard this case as one not to be severely dealt with. He would impose a fine of 2*l.* and 12*s.* 6*d.* costs.

Bankruptcy Reports.

Re James R. Johnson, carrying on business in Southport as "The Normal Power Co."—At the Liverpool Bankruptcy Court on August 15, the adjourned public examination of this debtor was heard. The liabilities amounted to 540*l.*, while assets were estimated to realise 21*l.* Debtor frankly admitted that he had no special qualifications to fit him for the occupation of "beauty specialist." He traded in all in about twenty different pills, powders, and hair-washes, the prescriptions for which he made "out of his own head," and had them filled by chemists in the South of England. As a previous order of the Court had not been properly complied with, the examination stood further adjourned until August 22.

Re Alfred John Warner, trading as Arthur Wallace, also as A. Gordon Wallace, lately a director of Rational Remedies, Ltd. (in liquidation), Fat-producing Specialist, 36 Glenshaw Mansions, Brixton Road, London, S.E., and 43 Kingsway House, Kingsway, London, W.C., lately of 20 Old Cavendish Street, London, W.—The creditors under this failure met on August 18 at the London Bankruptcy Court, before Mr. Walter Boyle, Assistant Official Receiver. The receiving order was made on the petition of Mr. J. R. W. Soper, who claims 66*l.* 9*s.* 1*d.*, and is returned by the debtor as the only creditor against the estate. Mr. Soper, however, stated at the meeting that he knew of other creditors and would furnish the Official Receiver with the necessary information. He added that it was a case calling for a searching investigation at the hands of the Court. The Chairman reported that it appeared from the debtor's statements when before the examiner that he was by profession an analytical chemist, but at present was without occupation. From February 1907 to April 1909 he bought and sold drugs and chemicals, wholesale and for export, on commission. In the last-named month he entered into partnership with Dr. J. H. Hart to carry on, under the style of "A. Gordon Wallace," a medical mail-order business. He (debtor) borrowed 300*l.* for the purposes of the capital, and an office was taken in his name at 20 Old Cavendish Street, where the business was carried on by means of advertisements advocating remedies for undue thinness. In three months they turned over about 300*l.*, and in July 1909 they sold the business to the Rational Remedies, Ltd., for 20*l.*, the company taking over the liabilities, which amounted to about 600*l.*, and raising capital by the issue of debentures. The debtor and Dr. Hart acted as directors of the company, the former using the name of Arthur Wallace both as shareholder and director, and Dr. Hart adopting the name of John Hunter Hamilton. Rational Remedies, Ltd., was wound up in January 1910, and the International Remedies, Ltd., was formed to acquire the goodwill and assets of the business, which was now being carried on at Kingsway House, Kingsway. The debt to the petitioning creditor was in respect of a bill accepted by the debtor on behalf of the Rational Remedies Co., and it was to his liability thereunder that the debtor attributes his failure. He returned no assets whatever. In the absence of any offer the case was left with the Official Receiver to be wound up in bankruptcy, the debtor's public examination being fixed for October 18.

Deeds of Arrangement.

Longman, Philip Olander, 111 Victoria Road, Hanley, Staffs, Drug-dealer.—Trustee: A. Bates, Pall Mall, Hanley. Dated August 8; filed August 15. Liabilities unsecured, 114*l.*; estimated net assets, 30*l.* The creditors include: Hanley Chemical Co., Ltd., Hanley (11*l.*); Raimes & Co., York (14*l.*).

Kendall, Charles William, trading as W. C. Kendall & Sons, Riby Street, Grimsby, and residing at 15 Grant Street, Cleethorpes, Cod-liver Oil Manufacturer.—Trustee: A. E. Peasegood, Crown Chambers, Land of Green Ginger, Hull, C.A. Dated August 12; filed, August 15. Liabilities unsecured, 5,110*l.*; estimated net assets, 250*l.* Among the creditors are: J. W. Hobbs, Grimsby (25*l.*); J. R. Peace & Co., Liverpool (1,265*l.*); The Produce Brokers, Ltd. (320*l.*).

Ridley, Charles, 172 Scotswood Road, Newcastle-on-Tyne, and 9 Esplanade Place, Whitley Bay, Chemist.—Trustee: T. C. Martin, Milburn House, Newcastle-on-Tyne, C.A. Dated August 4; filed August 10. Secured creditors, 784*l.*; liabilities unsecured, 689*l.*; estimated net assets, 1,262*l.* Among the creditors are: W. & A. Gilbev (14*l.*); S. Smith & Co., Ltd. (20*l.*); T. Ferry & Son, Gateshead (114*l.*); Evans Sons Lescher & Webb, Ltd., Liverpool (24*l.*); W. Glendenning & Son, Ltd., Newcastle (63*l.*); J. Ismay & Sons, Newcastle (96*l.*); C. E. Layne, Newcastle (51*l.*); Raimes & Co., York (11*l.*).

Gazette.

Partnerships Dissolved.

DAVIS, H. W., and HOSIER, H. W., Grafton Street, London, W., surgical and electrical instrument makers, under the style of H. & W. Davis.

DODD, H. N. N., and BERRY, A. W., Stockport, general medical practitioners, under the style of Dodd & Berry.

The Bankruptcy Acts, 1883 and 1890.

RECEIVING ORDERS.

BUCHANAN, ALBERT, Kew Green, Surrey, doctor of medicine.

HARLEY, RICHARD JAMES, late Blackburn, Lancs, doctor of medicine.

New Companies Registered.

The letters P.C. mean Private Company within the meaning of the Companies Act, 1907, and R.O., Registered Office.

ZOG, LTD. (P.C.)—Capital 10,000*l.*, in 1*l.* shares. Objects: To take over the business of manufacturing and selling the preparation known as "Zog" carried on by R. O. Burlison at Boar's Head Yard, Middlesex Street, E. R.O., Boar's Head Yard, Middlesex Street, London, E.

TYSON & CO., LTD. (P.C.)—Capital 20,000*l.*, in 10*l.* shares (1,000 preference). Objects: To carry on the business of soap-manufacturers, manufacturers and refiners of and dealers in oils and oleaginous and saponaceous substances, etc., and to acquire the business carried on at Liverpool as Tyson, Richmond & Jones. Registered by T. T. Hull & Son, 22 Chancery Lane, London, W.C.

DAMAR'S PURE DRUG CO., LTD. (P.C.)—Capital 100*l.*, in 1*l.* shares. Objects: To carry on the business of chemists, drugists, dealers in drugs, patent medicines, medicated wines, photographic chemicals and materials, drysalters, etc. The subscribers, each with one share, are: G. F. Corrall, 9 Clapton Square, N.E., chemist; R. H. Marchment, 57 Manor Park, Lee, S.E., analytical chemist. Registered by E. G. van Tromp, 16 Essex Street, Strand, London, W.C.

ASSOCIATION OF CERTIFYING FACTORY SURGEONS (INCORPORATED).—Registered as a company limited by guarantee, with 500 members, each liable to 1*l.* in the event of winding up, to carry on the business indicated by the title. The subscribers are: T. Fort, Falcon House, King Street, Oldham, surgeon; J. C. Eames, Barnfield House, Stoneclough, surgeon; T. Coates, 34 Church Street, Hyde, surgeon; J. B. Brinley, 522 Stretford Road, Old Trafford, Stretford, M.D. and Master in Surgery; A. G. Park, Fields House, Fields Road, Bolton, M.D. and Master in Surgery; T. W. Heywood, Lower Bank, Darwen, surgeon; W. F. Dearden, Normanhurst, 197 Urmston Lane, Stretford, R.O., 16 John Dalton Street, Manchester.

MERSYREN, LTD.—Capital 25,000*l.*, in 1*l.* shares. Objects: To carry on the business of manufacturers of and dealers in medicines and medical preparations, chemists, druggists, etc., to acquire the undertaking of Mersyren, together with the process of manufacturing and the right to manufacture and deal in the medicinal preparations known as Mersyren, and to adopt an agreement with A. Neagle and G. Paterson. The subscribers, each with one share, are: T. J. Worley, 47 Red Post Hill, Herne Hill, S.E., clerk; T. Bradford, 3 Surbiton Road, Southend-on-Sea; J. A. Matthews, 38 Lambton Road, Hornsey Rise, N., clerk; W. A. J. Ling, 6 Broad Street Place, E.C., incorporated accountant; A. Neagle, 17 Cockspur Street, S.W., gentleman; T. A. Dixon, 33 Lithos Road, N.W., journalist; E. S. Neagle, 143 Upton Lane, Forest Gate, clerk. Registered by Minchin, Garrett & Co., 22 and 23 Laurence Pountney Lane, Cannon Street, London, E.C.

Company News.

WHALLEY DRUG CO. (MILES PLATTING), LTD.—Claims to be sent to the liquidator, Mr. Fred Hamer, 101 Katherine Street, Ashton-under-Lyne, before September 14.

THE DISPENSARY, LTD., PENANG, S.S.—The first general (statutory) meeting of The Dispensary, Ltd., was held at the offices of Messrs. Evatt & Co., F.M.S. Railway Buildings, on July 18, Dr. J. Kirk presiding. Ten other shareholders were present. The business was purely formal. In addressing the meeting, the Chairman said that since the flotation of the company business had steadily increased. The prospects for next year were most encouraging. The directors of the company, which was floated a few months ago, are Mr. A. M. Stewart (managing director), Dr. T. H. Jamieson, Dr. J. Kirk, Dr. C. H. Hertz, and Mr. Goh Boon Keng. Messrs. Evatt & Co. were appointed secretaries.

A. S. WATSON & CO., LTD., HONG KONG.—The twenty-fifth annual meeting was held at the offices, Hong Kong. Mr. H. Humphreys, who presided, said: "We shall commence the erection of a new factory at North Point more arranged to our needs at once. The Hankow branch was sold as on December 31, 1909, at its book-value, and the amount of our general liabilities has been correspondingly reduced. Our policy in the future will be to concentrate the business and to close, as opportunity offers, all the small European branches not immediately adjacent to Hong Kong. The low rate of exchange which ruled during the year, the largely increased rentals we now have to pay for many of our business premises, and increased loss of subsidiary coinage, have combined to bring about poor results. The question of retrenchment has engaged the attention of your general managers and considerable economies have already been effected. This year has started better than last, so that we have reasonable ground for hoping that we shall be able to come before you next year with a better report." The report as published in the C. & D. of August 6 (p. 40) was adopted, and the appointment of Sir H. Mody as a member of the Consulting Committee was confirmed.

Mortgages and Charges.

Under the Companies (Consolidation) Act, 1908, Sec. 93, the mortgages or charges therein specified are (except in Scotland) void against the liquidator and any creditor of the company unless filed with the Registrar in accordance with the conditions laid down in the Act. The following have so been filed and, except where otherwise stated, are charged on the company's undertaking and property, present and future, including uncalled capital.

Bipsine, Ltd.—Particulars of 10,800*l.* debentures, created July 18, the whole amount being now issued. Charged on the company's undertaking, leasehold premises, etc.

Elgey, Ltd.—Mortgage dated May 9, to secure 800*l.*, charged on house and shop at Great Driffield. Holder: G. B. Tonge, Great Driffield.

Sapon, Ltd.—Particulars of 30,000*l.* 7 per cent. first debentures, created July 29. Present issue, 10,000*l.* Charged on the company's undertaking and property.

W. J. Bush & Co., Ltd.—Charge dated July 15 (supplemental and as collateral security to trust deed dated April 29, 1897, securing 125,000*l.* debentures). Property charged: Certain land in Sheep Lane, Hackney. Holders: R. Wigram, National Provincial Bank of England, Ltd., Bishopsgate Street, London, E.C., and J. F. Clarke, 41 Coleman Street, London, E.C.

Recent Will.

MR. JAMES HOGG BEARD, of "Waterside," Marple, Cheshire, druggist and drysalter, who died July 30, left estate of the gross value of 6,352*l.* 12s. 4d. His business as a druggist and drysalter he left to his son Edward, if he shall have attained majority, and shall have become a duly qualified chemist, the said bequest being charged with the payment of an annuity of 100*l.* to the testator's widow. If his son shall not fulfil these conditions, the business is to revert to the testator's widow.

New Remedies.

Astroline is a methyl-ethyl-glycolate of phenazone, $C_5H_{10}O_3C_2H_5ON_2$. It is a slightly bitter, white powder, recommended for nervous headaches, etc., in place of anti-pyrin.

Mercoquinol is the oxyquinoline-sulphonate of mercury. It is a dull yellow powder, soluble to the extent of 4 per 1,000 in water, and is used in syphilis.

Phosiron is a phosphotartrate of iron, recommended as a very easily absorbable form of iron.

Tanargentan is a combination of silver, tannic acid, and albumen. It is strongly recommended as a remedy in cases of typhus, dysentery, and gastro-enteritis.

Mucusane is the double zinc and boron salt of ortho-oxybenzoic acid, of the formula $[(C_6H_5CO_2)(OH)O.BOH_2]_2Zn$. It is a white powder, soluble in water and in most organic solvents. It is odourless, non-toxic, and does not stain. It is recommended in the form of injections for gonorrhœa, vaginal diseases, and for catarrh or any form of mucus discharge.

Scientific Progress.

Temperatures under this heading are on the Centigrade scale.

The Bulgarian Bacillus.—Margallan ("Comptes Rendus," 1910, 150, 45) points out that the Bulgarian sour-milk bacillus quantitatively ferments lactose into lactic acid, but leaves sucrose unchanged. A liquid containing both sugars ceases to reduce Fehling's solution when fermentation is at an end. It appears that this fact may be used for analytical purposes, where the estimation of the two sugars is required. The lactose is determined by reduction of Fehling's solution, and after fermentation the sucrose is inverted and determined in the same manner.

Liquid Extract of Cascara.—Kröber ("Pharm. Praxis," 1910, i.) states that an extract of *Rhamnus Purshiana* made from the true bark should give the following reactions: One volume of the extract, diluted with 1 volume of water and shaken with 10 c.c. of ether, should give an ethereal layer slightly coloured. If 5 c.c. of this layer is shaken with 5 c.c. of water and a few drops of ammonia, a fine cherry-red colour should result. Further, the liquid obtained after the filtration of a mixture of 1 part of extract with 9 parts of water should be at once rendered turbid by the addition of a solution of tannic acid, corrosive sublimate, ferric chloride, or molybdate of ammonium.

Nerol.—This alcohol, which occurs in oil of neroli, and has been recognised as an isomer of geraniol, possesses a characteristic perfume of its own, which is quite different from that of any of its isomers. A German patent has recently been granted for the preparation of nerol from the essential oil of *Helichrysum angustifolium*. This oil is of a reddish-brown colour, and possesses an odour somewhat recalling that of the rose. It has a specific gravity 0.902 to 0.920 at 15°; optical rotation, +0° to +2°; acid-value, 10 to 20; and ester-value, 110 to 135. The esters consist mainly of neryl acetate, from which the free alcohol is obtained. On keeping, the oil deposits a solid paraffin (stearoptene), melting at 67° C.

The Composition of Isinglass.—Courmont, Nogier, and Rochaix have published the most complete analyses of typical specimens of isinglass yet available. A are Russian samples, B Chinese, and C American :

	A.	B.	C.
Water ...	13-20	11-17	13-18
Mineral matter ...	0.5-1.7	0.9-2.3	1-3.7
K ₂ CO ₃ in ash ...	8-33	32-53	6-37
Soluble ash per cent. (H ₂ O)	65-81	68-86	59-75
Insoluble (HCl)	1-19	2-15	9-15
Fat ...	0.1-1.2	0.1-1.2	0.1-1.8
Collogene ...	79-85	81-98	80-87
Glutin (crude) ...	66-82	69-74	66-75
Acidity ...	0.6	0	0.2-7.5
Iodine value ...	19-45	39-46	30-47
Optical rotation	Lævo	Lævo	Lævo

Estimation of Salicylic Acid in Dilute Solution.—Noel C. Cassal ("Chem. News," June 24, p. 289), in a communication on the estimation of salicylic acid by the distillation of its dilute solutions, shows that alcohol retards the volatilisation of the acid, while other organic substances (notably tartaric and citric acids, sugars, and glycerin) possess an even more remarkable inhibitory effect, which may result in failure to detect salicylic acid added to wines and syrup unless it is present in large amounts. When, however, no interfering substances are present, it is found that if certain empirical relationships are observed (*i.e.*, if 90 c.c. of distillate is collected from 100 c.c. of aqueous salicylic-acid solution) the amount of acid in the original solution can be obtained by multiplying the amount found in the total distillate by 5.5 (the amount volatilising under the conditions of the experiment being one-fifth to one-sixth of the total amount). To apply the process to wine, the author renders a measured volume of wine contained in a separator strongly acid with a few drops of concentrated hydrochloric acid, and extracts the mixture three times with 25 to 30 c.c. of chloroform. The bulked chloroformic extracts are shaken out with three successive portions of distilled water, containing a few drops of normal sodium-hydrate solution. The mixed alkaline extracts are acidified with a few drops of phosphoric acid, made up to 100 c.c., and 90 c.c. distilled over into a measuring flask containing 10 c.c. of water. The salicylic acid in 20 c.c. of the distillate is determined colorimetrically and multiplied by five to give the total amount in the distillate. This figure is multiplied by the above factor, the results being finally calculated so as to express them in milligrams of salicylic acid per 100 c.c. of wine.

INFORMATION DEPARTMENT



Postal Address:

C & D. INFORMATION DEPARTMENT, 42 Cannon Street, London, E.C.

Telegraphic Address: "CHEMICUS LONDON."

Telephone No.: BANK 852 (two lines).

The object of this Department is to supply names and addresses of Manufacturers of, or Agents for, goods pertaining to the Chemical, Drug and Allied Trades. The "Buyers' Guide" in each issue of "The Chemist and Druggist" affords much information, but inquiries for anything not referred to therein may be addressed to this Department. Replies will be furnished immediately, or inserted in this section free of charge.

INFORMATION WANTED.

We would be obliged if any reader would inform us by post-card or telephone who are the makers or agents of the articles mentioned in the following inquiries received since our last issue:

- 257/3. "Atlas" aluminium combs.
- 4/24. "Mendit" in tubes: makers.
- 3/36. "Poudre Dobaire": a reducer.
- 7/4. "Guasco" burner and "formel."
- 252/66. Eau de Cologne "Bismarck-Strasse."
- 253/57. "Pecon & Maunier's" oil for internal use.
- 5/32. "Crayons Oja," for perfuming the skin: French makers.
- 259/53. Makers of "Oriental" toilet-vinegar, packed in 4-oz. squares, retailing at 1s.

INFORMATION SUPPLIED.

During the past week we have answered inquiries regarding the following articles. The information will be repeated to any other inquirers who send to the Department a stamped and addressed envelope for the purpose.

- "Albolene": makers and agents (3/35).
- Boldo-Verne: maker and agents (4/33).
- Byk's pepsin: makers and agents (4/5).
- Cornaline: makers (3/38).
- Damschinsky's hair-dye: supply (3/18).
- Davies triple-spring arch instep-support: makers (3/17).
- "Defiance" brand dried milk (6/71).
- Emp. resinae, B.P.: makers (5/36).
- Emulsifiers (for small quantities): makers (156/35).
- Entona: makers and suppliers (2/12).
- "Firmax" cycle outfit (5/70).
- "Force": makers (3/26).
- Fruit-syrups: supply (2/70).
- Galalith: makers and supply (1/25).
- Gledhill's cash-tills: makers' address (5/16).
- Gluten suppositories: makers and supply (1/26).
- Incandescent mantles and burners: wholesale supply (3/9).
- Ingluvin: makers and agents (1/36).
- Kearney's rat-poison: proprietors (259/70).
- "Kirby" toilet paper (7/72).
- Koumiss: suppliers (4/34).
- Lee's antiseptic-air producer: maker (1/22).
- Liq. plumine co. conc. (Schwartz's): supply (3/29).
- "Mendine": makers (4/24).
- Molybdenum chloride: makers (3/1).
- "Mucogene": maker and agents (3/24).
- "Murine" eye-remedy: makers and agents (3/23).
- "Nibestos" filters, makers (7/3).
- "Offord" truss: makers (3/73).
- Old-fashioned shape feeders: actual makers (3/64).
- "Panama" syringe: makers and supply (1/26).
- Paper bottles: supply (4/30).
- Penny and two-penny lines: suppliers (4/32).
- Record Polish Co.: address (259/19).
- Robinson's Coraline Dentifrice: proprietor (2/17).
- "Rodagen": makers and suppliers (2/44).
- Stationery: special supply (3/9).
- Sterilised milk in bottles: supply (3/66).
- Thin twine for capping-purposes: makers (3/37).
- Tinker's dog-mixture: maker (259/32).
- Tooth-powder tins: makers (3/43).
- "Touch-me-not" for insect-bites: makers (2/30).
- Trikresol: maker and agents (4/29).
- Thymol tooth-paste: makers (2/17).
- Tucker's Asthma Cure (7/4).
- Vasotonin: makers (1/66).
- Viennese international pharmacies (3/49).
- Zanna cachets: supply (3/29).

Observations and Reflections.

By Krayser II.

The Education Number

of the *C. & D.* comes at an opportune moment, and I congratulate you on the promptitude with which you have taken "occasion by the hand" in getting the opinions of so many of the most experienced pharmacy teachers in the country on the question of the curriculum. Unless the whole subject is quite stale—and it has been long enough on the carpet to have worn out the patience of most people—there ought to be considerable interest taken in some of the schemes put forward. I question very much if the official plan, when we are permitted to see it, will be half as practical as some of those that have been submitted. This leads me to say that if the Council want to carry their constituents with them in the matter of a compulsory curriculum they ought to take the members into their confidence by publishing, as soon as possible, full particulars of the scheme proposed.

When Doctors Disagree

a modest layman will hesitate to decide, but one may venture to express satisfaction with the general trend of opinion concerning the curriculum, as it is shown in the replies your "proposition" has elicited from pharmaceutical teachers. I am particularly glad to find so many of these gentlemen either assuming or expressly stating that practical acquaintance with the work of the shop is of the first importance—only one of them, I believe, proposes to abolish or seriously to modify the apprenticeship system—and scarcely less satisfactory is the opinion expressed by two of them that the education already demanded of the pharmacist is virtually sufficient, or, at any rate, as high as can reasonably be required under the present conditions of his lot. But honesty compels me to add that if a real education in science is necessary to the pharmacist, a compulsory curriculum of some sort is the only means by which this can be secured. Nobody ever was, or ever can be, educated in anything by merely cramming for an examination. I have been looking over the work of a friend who has recently passed the London Matriculation. His weak subject, he told me, was English, and to this, therefore, he had given special attention. So far as such a subject can be mastered without long practice he was perfect. His knowledge of grammar, analysis, and so forth was appalling, but he had not even begun to understand how to write, and for any educative influence it has had upon him English might as well have been a puzzle as a language. Science and literature are, in this respect, not quite on all-fours, but even the study of science does not consist only of the acquisition of knowledge, and I doubt whether it can be pursued with much permanent advantage on the lines laid down by some of your correspondents without devoting more time to it than the pharmacist can afford. From his point of view as a man of business the game would scarcely be worth the candle. The Irish pharmacy curriculum, as outlined by you last week, appears to me to satisfy all requirements, and the Irish Act to be in all respects preferable to our own.

Many Medical Mysteries

and not a few surgical casualties are explained nowadays by the *status lymphaticus*. This term is comparatively modern, and I question if one man out of a hundred has the faintest idea of what the words

mean, or could give any rational explanation of the trouble. For the matter of that the hundredth man cannot tell you either, and, indeed, the doctor himself, when faced with a problem that perplexes him, is suspected of taking refuge behind this most useful and mysterious "condition," as he calls it. If a patient dies suddenly on the operation-table through some unexplained cause, the chances are that it is ascribed to the

Status Lymphaticus;

should one expire in the dentist's chair, the same reason is likely to be assigned, particularly if the dentist is registered, though if the unfortunate operator is unregistered he is lucky if he is not indicted for manslaughter. And now you report a case of carbolic-acid poisoning where the child dies, and where the same explanation is forthcoming. It is known to many chemists that carbolic lotion, if improperly used, is apt to produce gangrene through absorption and blood-poisoning; but to admit such an explanation would possibly lead to some one being impeached for carelessness, and so the trouble is put down to idiosyncrasy due once again to the child suffering from the *status lymphaticus*. Truly a "blessed word."

Hop-picking,

which is of some interest to pharmacists, though of less importance to them than to brewers, is just commencing. The prospects of the year's crop are still uncertain. Of its two chief enemies, the "fly" and the mould, the former has now done its worst, but the other, which comes in the "burr" or blossom as well as in the leaf, and is generally worst after cold, wet weather, may still do damage. Few English industries have suffered more than hop-growing from changed habits and conditions of life, or from the exigencies of politics. Fifty years ago the acreage of the crop in England was seventy thousand or more; it is now about thirty-two thousand, of which nineteen thousand are in Kent, nearly three thousand in Surrey and Hampshire, the remainder in Worcestershire and neighbouring western counties. Hops will grow in almost any soil except bare chalk and sand, the better sorts doing best in light gravelly districts, the commoner ones thriving very well in clay. The plants are propagated from cuttings from the roots taken in February or March; these are usually bedded out for a year before planting in the hop-garden, where they are then set, three together, in "hills" of varying height above the ground, and in rows from six to eight feet apart. This is done early in the spring. The plants usually bear a small crop in the second year, but a full crop is not produced until the year following. It is said that the young bine always climbs from left to right, following the sun, whereas the scarlet runner bean invariably climbs the other way—that is, against the sun. The hops, when picked, are dried in kilns over fires to which a little roll-sulphur has been added. This brightens the hops, improves their colour, and makes them keep better. Their value depends greatly upon the skill and care used in the process. Mr. F. Taylor, to whose little book "Hops and the Hop-Trade" I am largely indebted for this note, attributes the present depression in the trade chiefly to the Government, but it is clear, even on his own showing, that other causes which no Government can control are to a great extent responsible for it; and there seems no good reason why hops should be singled out from other home-produce for preferential treatment. Our chief importations are from America, but the best foreign hops come from Bavaria. The Russian and Polish are said to be the worst.

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VETERINARY COUNTER PRACTICE. (6th Edition.) 4/-, by Post 4/4.
DISEASES AND REMEDIES. (3rd Edition.) 3/-, by Post 3/3.
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Editorial Articles.

Dental Matters.

The date of the meeting of chemist-extractors in the office of THE CHEMIST AND DRUGGIST has been altered to September 8, the reason being, as explained by Mr. Meakin in our correspondence columns, that the annual Congress and Exhibition of the Incorporated Society of Adaptors of Teeth, which is being held in the second week of September, is likely to bring some chemist-extractors to London, thus making the date more favourable than the one originally proposed. The need for a society to look after the interests of chemist-extractors is still urgent. At the annual meeting of the British Dental Association referred to last week (p. 248) the chief interest centred in the draft Bill for Prohibiting of Practice by Unqualified Persons, and the following resolution was carried :

"That the Association approves generally of the Bill, and instructs the Representative Board to endeavour to promote its acceptance by the Legislature."

A previous amendment limiting the Bill to an increased protection of title was defeated on a division by a majority of two to one. This seems to indicate that a spirit of no compromise is in the air. Mr. Morton Smale has written on the subject to "The Lancet," and in his letter seeks to enlist the sympathy and aid of the medical profession by branding unregistered persons as quacks. Mr. Smale pleads that he asks for the protection of the public, and not of the profession, because the practice of unregistered persons, he writes, increases rather than decreases the work of the qualified practitioners. He does not think the Bills of the British Medical Association and the British Dental

Association will become law, and therefore urges the profession to promote legislation on the whole subject. The following suggestions are made by Mr. Smale:

"That we should not attempt to rescind past legislation or suggest radical changes in the methods of qualification and registration, but endeavour to secure the introduction of a Governmental measure to deal with unregistered practice only. That the Presidents of the General Medical Council, the Royal College of Surgeons of England, and the Royal College of Physicians of London, the Regius Professors of Medicine of Oxford and Cambridge, together with similar representatives from the provincial universities, should go as a deputation to the Prime Minister and Home Secretary and state our case and our requirements. That the demand made to them should be: (1) The restriction of medical and dental practice to registered practitioners; (2) a penal clause; and (3) a clause to deal with vested interests—viz., that all unregistered practitioners now in practice should be permitted to obtain registration, on condition that they pass the respective examinations for medical or dental registration, without requiring them to fulfil the respective curricula."

It is in discussing and taking action on such points as are stated in the third demand that a society of chemist extractors would find scope for its activities. It has been suggested that there are societies in existence which could undertake this work, but, as has been pointed out, the draft dental Bill seems to be aimed specially at chemists who carry on dentistry in connection with pharmacy, and therefore a strong stand must be taken to prevent an encroachment upon existing rights. To show the absurdity of the proposed method of dealing with vested interests, it has only to be borne in mind that the worst class of dental quacks would be admitted, while pharmacists who practise dentistry would be ignored. In this connection we may usefully call attention to a campaign against dental quacks which is being carried on with vigour in "M.A.P.," the editor of which journal has favoured us with copies of the articles that have already appeared. We do not endorse all the allegations there made, because for some of the evils enumerated a remedy at common law already exists. We mention the matter because the British Dental Association's Bill brands chemist-extractors as beneath the wretched quacks whom our contemporary so mercilessly lashes. It will also be for the new Society to discuss whether a demand should be made for a continuing qualification for extractors as distinguished from the professional dentists with a medical training. The popular demand for inexpensive dentistry will continue, and it is highly desirable that it should be met in some legitimate way.

Linseed and Cottonseed Oils.

It is doubtful if ever before in the history of the vegetable-oil industry there has been displayed so much interest and excitement as has been the case this year. The abnormal evidences of statistical strength in both linseed and cottonseed oils, as outlined in our issue of January 22 last, have since led to unusually sensational market developments, which were even more marked in the United States than on this side. Our suggestion that high prices were likely to be maintained throughout the current year for such commodities has been fully borne out by events and still holds good. The further rapid rise in value has been such that no one would have thought it possible six months ago. Crop failures in North America and in the River Plate, combined with an increased consumption and keen speculation, have been chiefly responsible for the upward movements. The "boom" which was in progress in the early months culminated in the spring with linseed oil spurring to 42*l.* per ton, while crude cottonseed oil in London lately touched 34*l.*, these extreme figures marking an appreciation of 21*l.* 10*s.* and 11*l.* 15*s.* per ton respectively from the lowest

prices last year. The spring "boom" was followed by a severe reaction, the result of excessive speculation; but "booming" conditions have once more been experienced with the turn of the half-year and prices are again near high-water mark. Soya oil has fully shared in the upward movement, as will be seen from the following table:

	1910 (to end of July)	
	Highest	Lowest
Linseed oil, London spot per ton	£42	£31 15 0
Cotton oil, crude ditto	£34	£27 10 0
Soya oil ditto	£33	£24 0 0

The most striking feature is the phenomenal rise in the price of linseed oil, which has more than doubled itself in about a year. The market is almost on the verge of a "famine," as may be to some extent gathered from the following figures, giving the shipments of linseed for the last seven months to Europe compared with the two previous years:

	1908	1909	1910
India to U.K. (in qrs.)	222,000	382,000	590,000
India to Continent	298,000	462,000	765,000
La Plata to U.K.	1,481,500	1,260,000	625,500
La Plata to Continent	3,196,500	2,948,500	1,790,500
Russia to U.K.	164,000	79 00	31,000
Russia to Continent	88,000	113,000	83,000
U.S.A. to U.K. ...	55,000	9,000	4,000
U.S.A. to Continent	55,500	nil	nil
Total ...	5,570,500	5,253,50	3,889,000

These figures fully explain the severe scarcity confronting the seed-crushing industry, in addition to the much-reduced North American output, which has rendered necessary the importation of considerable quantities of seed by the United States from the River Plate, India, and even from this side, while purchases of the oil for the same destination have also been made in this market at a notable premium.

There now appears to be more justification for the renewed rise than in the spring, when the value of linseed oil for forward delivery stood at a discount of several pounds per ton, whereas the discount has lately been much reduced. The price of seed has risen well over the highest seen in the spring, although speculative buying has almost ceased at the current lofty range of values. The United States of late has been the chief supporting factor. Considering the dearth of supplies on the way to Europe and the limited quantities expected during the remainder of the season, European consumers undoubtedly recognise that no relief can reasonably be expected for some time to come, although the high prices must necessarily curtail consumption. The outlook for the new season too is not free from anxiety owing to the disappointing crop prospects both in the United States and the River Plate.

As regards cottonseed oil the position in the United States is acute, while another short crop has to be reckoned with. For the twelve months ending July 1 the American exports of oil to Europe were reduced more than 50 per cent. compared with the previous twelve months, and since that date the exports have dwindled considerably. This, coupled with the fact that the product has been lately shipped from this side to American ports, strongly emphasises the underlying conditions. There has been a big increase in the exports from Hull this year. The competition of soya oil does not appear to afford any material relief to the scarcity of other seed-oil products, the market for the comparatively new product being to some extent regulated by the relatively high prices ruling for soya beans in the Far East. There is but little doubt that various industries have been seriously affected by the famine prices ruling for oils. The big rise in palm oil and coconut oil also deserves mention, the supply of such commodities, which were formerly entirely absorbed by soapmakers,

having of late been seriously encroached upon by manufacturers of food-products.

In our Coloured Supplement a fortnight ago we mentioned that a meeting had been held by the German Soapmakers' Association at which means were discussed to introduce a price-basis for the sale of soap-products in consequence of the enormous rise in the cost of raw materials. Seeing that there is but little prospect of any material relief being experienced for some time to come from the extraordinary high prices now paid for the various products mentioned, while all kinds of fats, including tallow, are also dear, there is just a possibility of a move being eventually made by British soapmakers to protect their interests.

Pharmacies in Germany.

A PRELIMINARY report of the result of the pharmaceutical census undertaken on May 1, 1909, throughout the German Empire (*C. & D.*, April 17, 1909, p. 590) has now been published by the Imperial Board of Health. The last census was undertaken in 1895, and the figures given below in parentheses refer to the data then obtained. The total number of pharmacies, including branches, was 6,127 (5,161), or very nearly one pharmacy for every 10,000 inhabitants. As regards ownership, these businesses are divided into the following categories :

Private property : 5,833 (4,939).

In possession of the Crown, of the State, of municipalities, etc. : 71 (37), besides 223 (185) branches.

The pharmacies in private hands are again distinguished as follows :

Privileges : 1,781 (1,820).

Concessions which may be sold : 2,353 (2,351).

Purely personal concessions (unsaleable) : 1,693 (765), besides 6 pharmacies of special character.

It will be seen that the number of privileges has decreased; this is partly due to the fact that in some instances the holder of a privilege has renounced his rights to the Government on obtaining a personal concession, this generous action on the pharmacist's part being actuated by the fact that the concession in question represented a much better business, if only lasting for his lifetime, than the possession of a privilege in some small place with a decreasing turnover. Prussia, as the largest State, heads the list with a total of 3,603 pharmacies, Bavaria follows with 742, and then Saxony with 339; Saxe-Coburg-Gotha has 29, Hamburg 65, and the smallest number is in the principality of Reuss elder line—viz., 4, all of which are privileges. The district of Berlin boasts 189 pharmacies, of which 24 are privileges, 118 saleable concessions, and 39 personal concessions. The centre of the industrial growth of Prussia is also reflected in the pharmaceutical census: the largest number of pharmacies—633—is in the Rhenish Province; of these only 12 are privileges, and with the exception of 25 branches the remainder are concessions—that is to say, of comparatively recent creation and due to the increase of population in the large and more densely populated manufacturing parts of this province. The total number of persons employed in pharmacies and in branches was found to be 13,425 (12,036), 2.11 per 10,000 inhabitants, or 2.19 for every pharmacy. This total is classed as follows :

Owners, managers, and lessees	...	6,177	(5,209)
Assistants holding the State examination diploma	...	3,736	(2,254)
Assistants (qualified)	...	1,809	(2,254)
Apprentices	...	1,703	(2,319)

The appreciable decrease in the number of apprentices and of assistants with the assistant's qualification is significant. Of the assistants with the State diploma, 2 were females, besides 10 female apprentices and 5 assis-

tants; but these figures are possibly not exact, as a full declaration of the sex was not always made on the returns. As regards the number of employés in the pharmacies and branches of the empire the following figures were obtained :

	Number of Pharmacies
Working with one pharmaceutical employé	2,321 (1,976)
" ", two " ", employés	1,204 (1,094)
" ", three " ", "	431 (397)
" ", four " ", "	179 (234)
" ", five or more " ", "	86 (91)

The repartition of the pharmaceutical *personnel* in the various German States is not without interest, as it affords an illustration of the really large proportion of pharmacies which are worked single-handed by their owners. In the following table the figures under "Total" indicate both owners and assistants :

State	Number of Pharmacies	Total Personnel	Assistants
Prussia	...	3,603	7,968
Bavaria	...	742	1,644
Saxony	...	339	836
Alsace-Lorraine	...	239	412
Hamburg	...	65	225
Anhalt	...	39	73
Saxe-Weimar	...	45	95
Brunswick	...	56	125
Saxe-Coburg-Gotha	...	29	63

The lowest number of assistants—viz., 4—is in the principalities of Schwarzburg-Sondershausen, Waldeck, and Schaumburg-Lippe. Besides the regular pharmacies and branches considered above, 587 (533) medical practitioners had the right to hold a "house-pharmacy"; of these 109 (101) were homeopathic doctors; while 1,236 veterinary surgeons made use of their right to dispense the remedies required in their practice, and of these 792 had a fully equipped house-dispensary.

Lavender-growing.

An interesting article on the cultivation of English lavender was published in "The Times" recently, which gave several valuable "points" to growers. Mitcham, Hitchin, and Dorset are the principal centres of cultivation in England; but the author believes it could probably be grown successfully for the market on many of the sandy porous soils of Surrey, Hampshire, Berkshire, East Anglia, and numerous other districts, as well as on the wide tracts of chalk. Formerly it was believed that a dry warm chalk soil was essential for lavender cultivation; but it has now been proved that it also flourishes on the sandy seaside heaths near Bournemouth, and in that district a large and thriving lavender industry has been developed on what was formerly almost worthless ground. The author gives details and suggestions as to how lavender should be cultivated in the hope of interesting those who are inclined to experiment. The ground chosen, he states, should slope a little to the south or south-west, so as to get the full benefit of sunshine; it should be sheltered by a hedge or trees, but not to overshadow the plot or keep it from drying quickly after rain. It is scarcely worth while to begin with less than half an acre, while three acres is by no means too much for a serious attempt. If the latter is decided upon, it is inadvisable to plant the whole ground out in the first year for the following reasons :

Though a crop or two crops are secured the first summer after planting, the plants do not reach their full capacity until the third; and it is better therefore to plant out only half or two-thirds of the ground to begin with, so that the

full productive period may not be postponed longer than necessary. But the productive life of the plant ends after five years; and in order not to have to begin again after that time with nothing but young plants, it is advisable to put off planting the rest of the ground until the second year. Then in the third year more ground can be planted, if the grower chooses; and this will ensure that a substantial proportion of the crops will be in flower in each successive year to come.

The writer gives particulars of where to buy the young plants, and as there are several varieties, he describes the chief characteristics of each. Briefly, they may be divided into three classes: the Mitcham, Hitchin, and Grappenhall varieties. Mitcham plants, of course, have the best reputation; but the Hitchin variety is of much the same character, both of these being suitable for the dry chalky soils on which lavender has gained its reputation; while the Grappenhall variety, grown at Altrincham, has distinct characteristics of its own, being stronger and darker in appearance than Mitcham and Hitchin, but of slightly inferior aroma. It is most suitable for planting in a damp soil or situation. Particulars as to planting, which should be from October onwards, are next given, it being reckoned that 1,800 plants are required to stock one acre of ground, the price working out at about 16s. per hundred. It is advisable to buy plants grown from cuttings and not from branches of old plants. The ground should be ploughed or dug over, cleared of all weeds, and dressed with a fairly liberal allowance of stable manure; the plants should be dibbled in, in rows six feet apart, running north and south, and with an interval of four feet between them. As a rule the harvest begins early in August, though the time at which the plant is in full flower varies a little according to the nature of the season. The beginner in lavender-growing is advised to aim at selling the blossoms, the successful disposal of which, it need hardly be said, must depend on his own individual skill and enterprise. As a rule, Covent Garden is the biggest outlet for the bunches of cut flowers.

Ether-drinking.

Dr. William Calwell, Belfast, contributes a paper to the "British Medical Journal" on ether-drinking in Ulster. He refers to the recommendations of the Cookstown Magistrates that more restrictions be placed on the sale of ether, and to the differences of opinion that have been expressed as to the prevalence of the custom of drinking ether. Dr. Calwell has sent a letter and schedule of questions to every medical practitioner in Ulster outside Belfast. To 576 letters sent out 277 replies were received, and of these sixteen doctors stated that they knew of cases of ether-drinking from direct knowledge, while twenty-one had indirect knowledge of the habit. Classifying the districts where ether-drinking is prevalent, it is found that "the south-eastern portion of co. Derry and the eastern portion of co. Tyrone" embrace all the region affected. After discussing the origin of the practice, Dr. Calwell states that

Undoubtedly one great inducement is the low price and the ease with which it is obtained. Ether can be manufactured from methylated spirit in a comparatively pure state; this methylated ether is quite a different product from methylated spirit: the flavour and odour of the latter are not present; all the methyl products have been removed; its price is exceedingly small, about 1s. a lb. This is the price a shopkeeper in Magherafelt said he paid for it, and so a "dram" (5*j.*-*iv.*) at 1*d.* would afford a very handsome percentage of profit. It was not only sold by chemists across the counter, but by small grocers, and country women hawked it about the country. A "dram" or "draught" is repeated, if intoxication is desired—an old *habitué* can take two or three ounces; the novice generally takes water before and after.

It seems to be forgotten that ether is a scheduled poison in Ireland, and that the sale by some of the shopkeepers mentioned above could be readily circumvented.

Explosives Inspectors' Report.

The thirty-fourth annual report of the Inspectors of Explosives, which has just been issued, contains very little of direct pharmaceutical interest. The report is for the year 1909, and refers mainly to matters connected with the factories licensed and inspected, the accidents that have taken place in those buildings, and notes of the legal proceedings for infringement of the regulations made under the Explosives Act. It is gratifying to note that the number of fatal accidents by fire or explosion in the manufacture of explosives is below the average, and compares favourably with the death-rate in other dangerous trades. The inspectors were much occupied during the year in work connected with the Heat-test Committee, the Petroleum-spirit Committee, and the drafting of the regulations under the Cinematograph Act. It appears that there is a need for a good roofing-material for working buildings containing explosives. Roofing slates and tiles are dangerous, tarred felt carries fire, and corrugated iron is liable to cause much damage when carried some distance away, as it would be after an explosion in the building. The chemical advisers (the brothers P. V. and F. H. Dupré) report on the explosives they have tested during the year, but have no original work to record, their spare time having been taken up in connection with the Heat test Committee. It is stated that during the year sixty deaths have been caused by accidents with explosives, and these, it appears, from the details given in the Appendix, took place mostly during the use of explosives for legitimate purposes. One section of the report deals with petroleum, and we note several cases where licences to store petroleum and calcium sulphide were refused by local authorities, which decisions were reversed on appeal. One of these cases was that of the Timothy White Co., of Portsmouth. A good many accidents are recorded with petroleum-spirit, among them the lamentable dry-shampooing case which occurred a year ago.

Reciprocity with Queensland.

The question of reciprocity of pharmaceutical diplomas with Queensland has been mentioned in several of the London daily papers during the week, and the "Morning Post," in an interview with "a gentleman who holds a high position in the British Society," has told the reporter that the Pharmaceutical Society are treating Queensland exactly like the rest of the Empire, but Queensland is in a hurry. It is a case of a young man in a hurry. "For twenty years," said the official, "the Colonies have wanted to exchange diplomas with us and we have been quite willing, but had no power to meet them until the recent Act came into force. Now we are preparing to carry it out, but the work cannot be done in a week. There are only about two hundred chemists and druggists in Queensland, while the number in Great Britain is more than sixteen thousand. Are the interests of that great army to be sacrificed to those of an impetuous handful, as they might be if we did not act deliberately? We shall be glad to satisfy Queensland and every other part of the Empire, but we have to consider standards of education and standards of examination. We cannot recognise a diploma as equivalent to our own unless it is based on equally sound education and examination. . . . When we have drawn up our compulsory curriculum we shall use it as the basis for terms of reciprocity. Our Queensland friends may think it easy to frame a curriculum, but it is not. . . . We have received no complaint from any place but Queensland, and even there the force against us cannot be great, seeing that many of the two hundred chemists and druggists are members of our Society."

Refractive Indices of Essential Oils.

By Ernest J. Parry, B.Sc., F.I.C.

A NUMBER of determinations by me of refractive indices of essential oils have already been published in these columns (*C. & D.*, 1910, I., p. 178; see also Harvey and Wilkie, *C. & D.*, 1910, I., p. 442), and at that time it was indicated that a further series of determinations would be forthcoming later.

The utility of the refractometer in essential-oil analysis is becoming more generally recognised; but, nevertheless, it cannot be too strongly emphasised that in many cases little or no importance can be attached to its indications, whilst in numerous other instances this constant is invaluable. Apart from the value of the refractive index as a direct determination, the importance of this figure as determined in the various fractions of a given oil cannot be over-estimated. For if an oil be separated, either into ten equal fractions or into several fractions distilling at given temperatures, and the refractive indices of the various fractions be determined, especially in conjunction with the optical rotation and specific gravity of the fractions, a set of figures will be obtained which the most scientific essential-oil adulterator will usually find it difficult to imitate. The following results embrace :

I. The refractive indices of numerous individual constituents of essential oils, with certain other bodies.

II. The refractive indices of fractionated oils.

III. The refractive indices of a large number of samples of numerous essential oils.

(All values given below, except where otherwise indicated are $[N]_D$ at $20^\circ C.$)

I.

The following refractive indices are of individual constituents of essential oils: (a) as given in the author's "Chemistry of Essential Oils"; (b) various other authorities; (c) determined with the purest commercial specimens obtainable.

	A	B	C
Pinene ...	1.46553 [at 21°]	1.4650	1.4648
Camphene ...	1.4621 [at 48°]	1.4555 [N_c at 48°]	—
Limonene ...	1.4746	1.47459	1.47458 [from lemon oil] 1.47556 [orange oil]
Phellandrene ...	—	1.4840	1.4828-1.4839
Cadinene ...	1.5065	1.50647	—
Caryophyllene ...	1.4998	1.4997	—
Cedrene ...	1.50233	1.5015	1.5009
Humulene ...	—	1.4802	—
Patchoulene ...	1.50094	1.50094	—
Cymene ...	—	1.4790	1.4768
Myrcene ...	1.4700	1.4700	—
Ocimene ...	1.5296	1.5296	—
Limene ...	1.4935	1.4935	—
Borneol esters—			
Bornyl acetate	1.46635	—	1.4600 [at 30°]
Bornyl propionate	1.46380	[at 15°]	—
Bornyl butyrate	1.46280	—	—
Geraniol ...	1.4776	1.4766-1.4786	1.4770-1.4798
Linalol ...	1.4630	1.4630	1.4600-1.4652
Citronellol ...	1.4566	1.4612	1.4555-1.4586
Geranyl acetate ...	1.4628	1.4628 [at 15°]	1.4600-1.4660
Linalyl acetate ...	—	1.4455-1.4460	1.4460
Terpineol ...	1.4747-1.48132	1.4800	1.4780-1.4865
Terpinyl acetate	—	1.4673	1.4625
Cineol ...	1.4596	1.4593	1.4580-1.4606
Citral ...	1.4931	1.4862	1.4890-1.4936
Citronellal ...	1.4481-1.4536	1.4441	1.4506
Benzaldehyde ...	—	1.5427	1.5430-1.5465
Thujone ...	1.4503 [at 22°]	1.4507-1.46306	1.4496
Methyl-nonyl ketone	—	1.4288	—
Eugenol ...	1.5400	1.5439	1.5418-1.5453
Safrol ...	—	1.5383	1.539-1.5440

	A	B	C
Anethol ...	—	1.56149	1.5630
Amyl acetate ...	—	1.3983	1.399-1.4012
,, butyrate ...	—	1.4080	1.4105
,, valerianate	—	1.4100	1.4136-1.4145
Benzyl acetate ...	—	1.5020	1.5050
Butyl butyrate ...	—	1.4037	1.4049
Ethyl oxalate ...	—	1.4075	1.4090
Ethyl succinate ...	—	1.4190	1.4219
Glycerin ...	—	1.4710	1.4710-1.4720
Glycercyl acetates	—	—	1.446-1.4500
Phenyl ethyl alcohol	—	—	1.5220-1.5240

II.

The following tables deal with fractionated oils:—

Spike Lavender Oil.—Three samples of genuine oil fractionated into nine equal fractions of 10 per cent. each gave the following refractive indices, figures in parentheses referring to the optical rotation.

	1	2	3
Original Oil ...	1.4662 [$+1^\circ 30'$]	1.4658 [$+3^\circ 30'$]	1.4643 [$+5^\circ$]
Fraction 1 ...	1.4602	1.4600	1.4600
" 2 ...	1.4620	1.4600	1.4600
" 3 ...	1.4620	1.4615	1.4600
" 4 ...	1.4622	1.4620	1.4608
" 5 ...	1.4630	1.4620	1.4611
" 6 ...	1.4630	1.4628	1.4612
" 7 ...	1.4645	1.4650	1.4611
" 8 ...	1.4666	1.4660	1.4638
" 9 ...	1.4745	1.4738	1.4694
Residue ...	1.4865	1.4859	1.4825

Rosemary Oil (also see *C. & D.*, 1906, II., p. 137, where three other samples are reported on by the author and Bennett).—Nine equal fractions collected with 10 per cent. residue.

	1	2	3	4
Original Oil ...	1.4690	1.4685	1.4684	1.4700
Fraction 1 ...	1.4650	1.4649	1.4665	1.4650
" 2 ...	1.4650	1.4645	1.4660	1.4655
" 3 ...	1.4660	1.4650	1.4660	1.4660
" 4 ...	1.4670	1.4665	1.4660	1.4670
" 5 ...	1.4675	1.4680	1.4675	1.4671
" 6 ...	1.4700	1.4685	1.4672	1.4670
" 7 ...	1.4700	1.4685	1.4681	1.4675
" 8 ...	1.4705	1.4690	1.4680	1.4676
" 9 ...	1.4715	1.4718	1.4699	1.4700
Residue ...	1.4875	1.4859	1.4848	1.4875

Peppermint Oil (American).—Three samples (also see Parry and Bennett, *C. & D.*, 1904, I., p. 85).

	1	2	3
Original Oil ...	1.4640	1.4645	1.4640
Fraction 1 ...	1.4608	1.4631	1.4600
" 2 ...	1.4619	1.4609	1.4601
" 3 ...	1.4638	1.4625	1.4640
" 4 ...	1.4640	1.4650	1.4635
" 5 ...	1.4640	1.4650	1.4629
" 6 ...	1.4645	1.4651	1.4648
" 7 ...	1.4655	1.4658	1.4660
" 8 ...	1.4640	1.4650	1.4665
" 9 ...	1.4661	1.4629	1.4660
Residue ...	1.4789	1.4779	1.4775

Sandal-wood Oil.—Three samples (also see Parry and Bennett, *C. & D.*, 1907, II., p. 19).

		1	2	3
Original Oil	...	1.5085	1.5074	1.5072
Fraction 1	...	1.5030	1.5035	1.5035
" 2	...	1.5030	1.5042	1.5036
" 3	...	1.5050	1.5052	1.5041
" 4	...	1.5065	1.5068	1.5061
" 5	...	1.5071	1.5069	1.5075
" 6	...	1.5082	1.5075	1.5080
" 7	...	1.5090	1.5088	1.5090
" 8	...	1.5110	1.5105	1.5100
" 9	...	1.5098	1.5108	1.5150
Residue	...	1.5195	1.5220	1.5190

III.

Refractive Indices of Essential Oils.

Essential Oil	No. of Samples	Range of Refractive Indices
Almond oil (bitter) ...	15	1.5428-1.5439
" (sine HCN) ...	24	1.5440-1.5490
Angelica oil ...	3	1.4793-1.4821
Aniseed oil ...	36	1.5552-1.5560
Bergamot oil (esters 35-36%) ...	12	1.4650-1.4688
" (36-38%) ...	12	1.4660-1.4685
" (38-40%) ...	21	1.4660-1.4690
Buchu oil ...	3	1.4800-1.4820
Cajuput oil ...	11	1.4600-1.4671
Calamus oil ...	2	1.5062-1.5081
Camphor oils (heavy sp. gr. 1.075-1.090)	8	1.5000-1.5088
" (light sp. gr. (0.870-0.885) ...	10	1.4650-1.4760
Caraway oil ...	23	1.4858-1.4939
Cardamom oil ...	8	1.4621-1.4695
Cascarilla oil ...	2	1.4885-1.4895
Cassia oil ...	30	1.5880-1.5960
Cedar oil ...	7	1.4992-1.5052
Cedar-leaf oil (commercial contains thuja-leaf oil) ...	3	1.4751-1.4800
Celery oil (seed) ...	2	1.4794-1.4815
Citronella oil (commercial) ...	135	1.4798-1.4835
" (pure) ...	15	1.4710-1.4750
Citron oil (true) ...	1	1.4753
Clove oil ...	26	1.5330-1.5355
Coriander oil ...	2	1.4666-1.4672
Cubeb oil ...	8	1.4915-1.4953
Cummin oil ...	3	1.5011-1.5050
Dill oil ...	17	1.4778-1.4896
Eucalyptus oil (B.P.) ...	59	1.4600-1.4675
Fennel oil ...	8	1.5215-1.5274
Geranium oil (true) ...	22	1.4628-1.4675
" (palmarosa) ...	12	1.4760-1.4819
Ginger oil ...	4	1.4850-1.4992
Gingergrass oil ...	6	1.4800-1.4855
Hop oil ...	4	1.4815-1.4908
Juniper oil (B.P.) ...	25	1.4720-1.4895
Lavender oil (esters 28-36%) ...	19	1.4626-1.4679
Lemon oil ...	89	1.4749-1.4770
" (adulterated, sp. gr. 0.852-0.854; citral, 2-3%) ...	19	1.4715-1.4735
Lemongrass oil ...	68	1.4820-1.4888
Lime oil ...	16	1.4760-1.4775
" (adulterated with terpenes) ...	6	1.4730-1.4746
Mustard oil (essential) ...	7	1.520-1.5360
Neroli oil ...	14	1.4746-1.4770
Nutmeg oil ...	8	1.4755-1.4796
Orange oil ...	31	1.4731-1.4770
Parsley oil ...	3	1.4880-1.5076
Patchouli oil ...	8	1.5050-1.5190
Pennyroyal oil ...	8	1.4750-1.4831
Peppermint oil ...	38	1.4620-1.4675
Petitgrain oil ...	21	1.4620-1.4645
Pimento oil ...	10	1.5310-1.5352
Rose oil (otto) ...	10	1.4620-1.4650
" (adulterated with alcohol) ...	185	1.4570-1.4605
" (geraniol, etc.) ...	40	1.4660-1.4790
Rosemary oil ...	136	1.4670-1.4700
Sandalwood oil ...	136	1.5050-1.5089
Spike-lavender oil ...	52	1.4620-1.4676
Thyme oil (phenols 25-40%) ...	15	1.4850-1.4985
" (origanum 60-75%) ...	14	1.5040-1.5118
Vetiver oil ...	4	1.5175-1.5209
Wintergreen (Betula) oil ...	13	1.5340-1.5366

Veterinary Notes.

By a M.R.C.V.S.

Horses' Legs.

IN several debilitating diseases of the horse the legs remain cold, stiff, and benumbed. In such cases it is imperative that the legs should be frequently and regularly rubbed with an emulsion of stimulating liniment and then bandaged. This greatly assists the animal's recovery.

Loss of Appetite in Horses.

VERY often when a horse is convalescent, with a capricious appetite, a carrot proves acceptable, and will be eaten when all other kinds of food are refused or rejected. The carrots should be new, sound, clean, and of average size, and cut lengthways to prevent choking. If there is any difficulty in getting the horse to take them, the carrots should be grated to make them more inviting. Carrots are a good tonic and brace up the appetite.

Coughs are Symptoms.

It is of paramount importance in prescribing medicines for an animal with a cough to ascertain the nature of the cough, as the cough is not a disease but rather a symptom. Coughing arises from irritation of some part of the respiratory system, and may be either simple or chronic. A study of the various coughs, usually divided into seven classes, should be made, which will prove of great assistance in diagnosing and prescribing, and make it easier to alleviate the cough by attacking the cause.

Galactagogues.

VERY often the chemist is consulted in regard to increasing the flow or secretion of milk in an animal. Careful inquiry should be made into the condition of the animal, surroundings, and food. Advise warmth, good and succulent diet, and give jaborandi and iron and strychnine tonics. A poultice of fresh leaves of the castor-oil plant, with doses of the oil, is gaining favour and proving very satisfactory. The treatment has to be continued for some time before good results will be shown.

Aphonia in Dogs.

APHONIA, or loss of voice, is often found in the dog. It is due to an affection of the larynx and paralysis of the vocal cords. In rabies there is a partial loss of voice, the animal emitting a semi-bark. Cold is a predisposing cause of aphonia; cancer and tuberculosis of the throat are also prominent causes. In treating, first find out the real cause. If due to cancer or tubercle, excision must be resorted to; if from an inflammatory affection, poultice, foment, and steam the head, adding a little oil eucalypti to the water; swab the throat with any mild astringent, and give an electuary containing camphor, ammon. chlor., and ext. belladonnae; chlorodyne and vin. ipecacuanhae are also recommended. If due to paralysis, strychnine and eserine, with electricity, will materially assist in the recovery.

Epizootic Abortion in Cattle.

THE Departmental Committee appointed by the Board of Agriculture and Fisheries in April 1905 "to inquire by means of experimental investigation, and otherwise, into the pathology and etiology of epizootic abortion, and to consider whether any, and if so what, preventive and remedial measures may with advantage be adopted with respect to that disease," have completed their investigations and issued their report. The evidence shows that epizootic abortion of cattle—an inflammation of the pregnant womb and of the membranes which surround the fetus—is widespread in this country, and causes heavy losses to those who are engaged in cattle-breeding and dairying. The contagious nature of the disease and the advisability of dealing with it under the Diseases of Animals Act are very generally recognised by stock-owners. The Committee recommend that, as a preliminary measure, epizootic abortion in cattle should be dealt with under an Order of the Board of Agriculture and Fisheries, requiring: (1) Compulsory notification of suspected cases of the disease; (2) veterinary inquiry to establish the existence of the disease on any particular premises; and (3) temporary isolation and restrictions on the movement of any cow that has recently aborted.

Birth.

DUNDAS.—At 18 Montpelier Terrace, Edinburgh, on August 4, the wife of R. E. Dundas, chemist and druggist, of a daughter.

Marriages.

AITKEN—GAUNTLETT.—At "Rossdhu," Hastings, New Zealand, on August 12, by the Rev. P. C. Ramsay, of St. Andrew's Presbyterian Church, James Baird Aitken, pharmacist, to Annie, second daughter of Mr. Archibald A. J. Gauntlett, Waverley Park Terrace, Edinburgh.

MCCONNELL—FULLERTON.—At St. Patrick's Church, Ballymacarrett, last month, by the Rev. S. B. Crooks, William McConnell, the Causeway Medical Hall, Bushmills, co. Antrim, to Annie J. (Cissie), youngest daughter of Mr. Francis Fullerton, Mountpottinger.

RICKEARD—BRYCE.—At Kilmarnock, N.B., on August 8, Reginald Rickeard, pharmacist, Chester, son of Mr. and Mrs. Rickeard, Newcastle-on-Tyne, to Annie Bryce, daughter of Mr. and Mrs. Bryce, Kilmarnock.

SILVER WEDDING.

HUTCHINS—PIKE.—At St. Philip's Church, Kennington Road, London, S.E., on August 13, 1885, by the Rev. W. M. C. Macalister, Edward Coxhead Hutchins, son of the late Charles Hutchins, chemist, of Neath, South Wales, to Sarah Louise Pike, daughter of the late William Pike, chemist, of Kennington.

Deaths.

FITCH.—On July 25, at Jeffersonville, Ind., U.S.A., Colonel Edward Wright Fitch, formerly manager of Parke, Davis & Co.'s New York crude drug branch, aged sixty-seven. Colonel Fitch commenced his business career in the retail drug-store of G. W. Patrick & Co., Terre Haute, Ind., but with the outbreak of the Civil War he enlisted in the Indiana Volunteers, and his gallantry and services afterwards gained for him his title. He was, however, obliged to abandon his military career as the result of an attack of typhoid, and returned to his former employer. Subsequently he was a partner in the firm of Arthur Peter & Co., of Louisville, Ky., which later became the Peter-Neat-Richardson Co. In 1894 he joined Parke, Davis & Co., who had established a crude-drug importing business in New York, and three years later he succeeded to the management of this branch, retiring in 1906. Colonel Fitch was prominently identified with the Drug and Chemical Club and the Drug-trade Section of the New York Board of Trade and Transportation.

HISTED.—At Brighton, on August 11, Mr. Edward Histed, pharmaceutical chemist and dentist, from malignant throat disease. Mr. Histed was in business at 2 Upper St. James' Street, Brighton, and had served for many years on the local Town Council. He was an ardent Free-mason.

NIGHTINGALE.—At 10 South Street, Park Lane, London, W., on August 13, Florence Nightingale, aged ninety. Miss Nightingale is well known as the organiser of the Army Nursing Service during the Crimean War in 1854. When she returned from the war a national fund, amounting to about 50,000/-, was raised in recognition of her services. This money Miss Nightingale applied to the founding of an institution for training nurses, which has raised the status of nurses in a remarkable degree. Miss Nightingale published "Notes on Nursing" in 1858, and also wrote various other articles on her favourite subject. She was a member of the Order of Merit, and recently had conferred upon her the freedom of the City of London, an honour rarely bestowed upon a woman.

STANGROOM.—At Cley-next-the-Sea, Norfolk, last week, Mr. Frederick Stangroom, chemist and druggist. Mr. Stangroom was in business at Cley-next-the-Sea for half a century prior to his retirement, which was occasioned by ill-health. The funeral took place on August 11.

WILLIAM.—At Isle of Whithorn on August 5, Mr. John William, retired chemist. Mr. William was formerly in business in Victoria Street, Newton Stewart, retiring about twenty years ago.

Personalities.

Notes for this section must not be in the nature of advertisements, and they should be authenticated when sent to the Editor.

MR. R. A. ROBINSON, J.P., ex-Chairman of the London County Council and ex-President of the Pharmaceutical Society, has been appointed a Deputy-Lieutenant for the County of London.

MR. R. A. ROBINSON, JUN., Ph.C., barrister-at-law, presented a paper on "British Administrative Methods of Repressing the Adulteration of Food" to the International Congress of Administrative Sciences held in the grounds of the Brussels Exhibition during the last week in July.

SIR T. A. BRAMSDON, who was defeated at Portsmouth by Lord Charles Beresford at the last General Election, is to succeed Sir Luke White, M.P., as President of the Coroners' Society. This honour is the outcome of the prominent part which Sir Thomas took in the recent investigation by a Departmental Committee into the whole question of the law relating to coroners and coroners' inquests and into the practice prevailing in coroners' courts throughout the country. As a member of that body, and particularly as the coroner for many years past for the Portsmouth district, Sir Thomas's services on the Committee have been of an especially valuable character. Sir Luke White is the member for the Buckrose Division of Yorkshire, and one of the few coroners in the present House of Commons.

MR. A. MACDONALD, who is the new President of the Pharmaceutical Society of the Transvaal, is an Elgin man, in which town he served his apprenticeship with Mr. R. Duncan. Subsequently he was for several years with Messrs. Squire & Sons, London. Mr. Macdonald arrived in the Transvaal seven years ago, and is the retail manager of Messrs. Loewenstein, Adams & Co., Johannesburg. He was Vice-President of the Society last year, and has filled the office of Hon. Secretary and Treasurer. His election as President is a very popular one among his colleagues and his many chemist friends, not only in South Africa but in other parts of the world. He is an enthusiastic pharmacist, and on the "bowling green" is one of the best-known players in South Africa.



MR. A. MACDONALD.

Where to Study.

The following educational institutions are advertising in this issue:

School of Pharmacy, Bloomsbury Square, London, W.C.
Muter's (South London) School of Pharmacy, 325 Kennington Road, London, S.E.

London College of Pharmacy, 323 Clapham Road, London, S.W.

South of England College of Pharmacy, 185 Clapham Road, London, S.W.

Northern College of Pharmacy, 100 and 102 Burlington Street, Manchester.

Leeds College of Pharmacy, Clarendon Street, Leeds.
Edinburgh Central School of Pharmacy, 26 Clyde Street, Edinburgh.

Taplow Grammar School, Taplow.
British Optical Institute, Ltd., Mount Edgcumbe Gardens, Clapham Road, London, S.W.

Armstrong College, Newcastle-upon-Tyne.

University of Bristol, Bristol.

Glasgow and West of Scotland Technical College, Glasgow.

Goldsmiths' Institute, New Cross, London, S.E.

Central Correspondence College, 20 High Holborn, London, W.C.

Agricultural Notes.

Potassium-cyanide Insecticide.

In the "Revue Scientifique" the use of potassium-cyanide solution is recommended as an insecticide for the soil. The soil receives a series of injections each of 8 c.c. of a solution of potassium cyanide (200 grams per litre), and made to a depth of 10 to 20 cm. The action is stated to be milder than that of carbon bisulphide, but more complete. It takes a few days for the full effect to be obtained. Plants are not injured except by strong doses, nor are the soil ferments stopped.

Copper Oxychloride,

which is a by-product of the manufacture of alkalies by Grenier's electrolytic process, is recommended by Chuard ("Comptes Rend.") as a better copper salt for preparing a grape-mildew paste than copper sulphate generally employed. It is insoluble in water, has great adhesive power, and on exposure to air dissociates gradually with the liberation of small quantities of soluble copper chloride. In aqueous medium containing 500 grams per hectolitre as good effects are obtained as with copper-sulphate paste containing 2 per cent.

Soil Organisms.

PROFESSOR W. B. BOTTOMLEY has recently been granted a patent (11365/09) for a method of preparing nitrogen-fixing organisms for use in agriculture and horticulture. The nutrient medium consists of mannitol 20 grams, potassium phosphate 1 gram, magnesium sulphate 0.5 gram, and calcium carbonate 0.5 gram, in water 1 litre. The culture is prepared by adding ordinary cultivated soil to this medium, when in about a week a brown scum appears on the surface of the liquid, which is removed and cultivated on agar plates containing the above nutrient medium. Drops of this culture and one prepared from the organisms from the nodules of the roots of leguminous plants are then mixed with water and added to a solution containing maltose 15 grams, mannitol 10 grams, potassium phosphate 1 gram, and magnesium sulphate 0.5 gram per litre of water. The inoculated solution is kept at 22° to 28° C. for forty-eight hours, and the milky liquid that results is used for moistening the seeds or, when diluted, watering plants. For making a portable preparation sterilised soil is impregnated with the milky liquid and dried at a low temperature, or agar-agar (2 per cent.) may be added to the liquid to solidify it.

Chemical Fertilisers.

ZACHAREWICZ ("L'Engrais") gives the following series of chemical manures suited for kitchen-gardens, the quantities indicated being for a hectare (2½ acres) :

Kilos.	Artichokes	Asparagus	Cabbage	Lettuce	Melon	Tos	Potatoes	Strawberries	Tomatoes
Calcium sulphate (plaster) ...	400	400	400	400	400	—	400	400	400
Potassium chloride ...	200	—	300	200	—	100	300	—	150
Potassium nitrate ...	—	200	—	—	250	100	—	—	—
Potassium sulphate ...	—	—	—	—	—	—	200	—	—
Sodium nitrate ...	250	—	300	150	—	—	350	—	250
Superphosphate ...	500	300	300	400	500	300	600	400	400
Ammonium sulphate ...	—	100	—	—	—	—	—	—	—

In the case of artichokes the fertiliser is used a few days before planting the shoots, the nitrate being employed in March, the cabbage and lettuce fertilise at the transplantation stage, and the pea one a few days before sowing the seeds. In the case of the potato-manure the nitrate is reserved to a later stage; and the tomato-fertiliser is employed, the potash and superphosphate a few days before transplanting, and the nitrate fifteen to twenty days afterwards. For incorporating with each 100 kilos. of soil used in frames it is recommended to add potassium nitrate 0.3 kilo., superphosphate 1 kilo., and plaster 1 kilo.

Poisoning Cases.

ELEVEN fatalities from poisonings, including one case of misadventure, have been reported during the week.

Ammonia.—At Parr, St. Helens, Samuel Myers (72), shoemaker, died from the effects of ammonia-poisoning.

Carbolic Acid was the lethal agent intentionally taken, with fatal results, by Henry Hale (63), mattress-maker, High Holborn, London, W.C.

Laudanum.—At the inquiry held at Nottingham into the death of Frances Emily Cockayne, the wife of a commercial traveller, who died from the effects of taking laudanum, the Coroner (Mr. C. L. Rotheral) said in answer to a jurymen that chemists could sell laudanum in unlimited quantities. The drug could be purchased by a child eight years of age, and it was one of the poisons which should be better protected. Suicide while temporarily insane was the jury's verdict.

Oxalic Acid was used for suicidal purposes by Raymond Edwin Hildreth (35), park-keeper, of St. James's Park, London, S.W. Deceased, who was a retired Army corporal, was found dead on Hampstead Heath.

Salt of Lemon was taken with suicidal intent by Timothy Wilson Sutton (66) at Saltash. At the inquest Dr. Meadows said deceased apparently had only taken a small dose, but weak action of the heart had caused death.

Spirit of Salt.—At Paddington, Fanny Eliza Whatson (44), cook, poisoned herself by taking a large quantity of this corrosive fluid.—Spirit of salt, accidentally taken about three months ago, caused the recent death from malnutrition of John Campbell (44) at the Bedford County Hospital.—Starvation in consequence of attempting to commit suicide with this acid also caused the death of James Cressingham (22), milk-carrier, Hackney.

Strychnine was the agent used by Maud Tompkins, King's Caple, to ensure self-destruction. Deceased, who was a medical practitioner's parlourmaid, had taken some money belonging to her employer.—At an inquest held at Gravesend relative to the death of Sarah Jane Woodhams, who committed suicide by taking vermin-killer, a juror asked whether there should not be restrictions placed on the sale of such poisons in packets. The Coroner (Mr. G. Evans Penman) said there was no restriction on the sale of this class of poison, and that anyone could buy it. Every precaution, however, was taken, for it was labelled "Poison" in big letters. It was essential that some restrictions should be laid down respecting the sale of this class of poisons, and he thought that it would ultimately be made by law more difficult for people to obtain poison, especially the simple ones. Dr. C. J. S. Dismoor deposed that death was due to strychnine-poisoning. He said that a sixpenny packet of vermin-killer would contain 6 to 8 grains of strychnine, which was sufficient to kill about four or five people.

Vermin-killer.—At the inquiry held at Leeds into the death of Emily Nicholas (46), widow, Holbeck, the evidence showed the deceased, who had been ill for some time, had taken rat-poison.

THE BRITISH GOVERNMENT has declined to take part in the International Hygiene Exhibition to be held at Dresden in 1911, considering that it would not be practicable to arrange an official exhibit, owing to the reluctance of manufacturers in this country to incur the heavy expenditure involved in frequent participation in large international exhibitions.

THE FOREIGN OFFICE have notified the Board of Trade that the Japanese Government have given formal notice of the termination of the Treaty of Commerce and Navigation of 1894 between this country and Japan. The treaty, together with the supplementary convention respecting the duties to be charged on British goods imported into Japan, terminated on July 17. An Imperial Ordinance has been published at Tokyo which notifies that the new Japanese Customs Tariff Law came into operation on July 17.

"THE UNINTENTIONAL ERROR."—In the current issue of "Printers' Ink" a Mr. Alan Walker criticises (under this heading) the effective advertisement "The Short Cut," which Messrs. May, Roberts & Co., Ltd., have had in THE CHEMIST AND DRUGGIST on various occasions. Mr. Alan Walker's complaint is that Messrs. May, Roberts & Co., Ltd., do not state in their advertisement what they are trying to sell, and as he, the writer, is not a chemist "he does not know from his own native prescience what their business is." He questions whether even every chemist knows, and suggests that the advertisers would do well to remember the fact that there must be a certain number of chemists starting in business every year who have no information as to the scope of their business. To anyone connected with the drug trade these criticisms are ridiculous, but they afford another example of the omniscient character of "advertising experts" who are given to generalising upon insufficient data.

Bookkeeping Systems.

I HAVE noted with interest the opinions expressed in recent issues of THE CHEMIST AND DRUGGIST with regard to the relative merits of bound ledgers, loose-leaf ledgers, and cards for keeping accounts, and having used each of these systems my experience may be useful to others.

BOUND LEDGER.

This ledger is not yet obsolete, though up-to-date bookkeepers have long ago discarded it. One commences by posting, say, fifty accounts. The first consideration is to estimate the number of pages to be reserved for the letters of the alphabet. This having been done and the accounts indexed at the beginning of the ledger, at the end of a given period, if business is at all brisk and new customers numerous, it will be found that the pages allotted to particular letters are insufficient, and one may have names beginning with A appearing under M, those with B under S, etc. In the index, too, names under certain letters may become very numerous and have to be transferred to other pages of the index. This state of the ledger causes much loss of time when balancing, when it will be necessary to go over each page to extract fifty or sixty balances out of the 200 accounts occupying 500 pages. A great disadvantage also arises when the head of the business wishes to inspect a certain customer's account. All one can do is to bring to him the entire ledger containing over 200 accounts in order to show him one.

LOOSE-LEAF LEDGERS.

We now come to what is defined as the bridge which connects the cards with the bound ledger. Here one has a binder in which the leaves are kept together by a lock, so that to add an account or take one out it is necessary to unlock the binder, put the new leaf in its correct place, and relock it. This has to be repeated each time an account requires insertion or extraction. The indexing varies somewhat from the bound ledger, although the tedious writing and tracing of names remains the same. Instead of having the whole index at the front, it is in pages, each with its respective letter attached upon the right-hand side a certain measured distance down the page, so as to show at a glance the whole alphabet when the pages are inserted between the various accounts. In balancing, the same great disadvantage is experienced which is found in the bound ledger, that of examining every account for its balance. It is true that a separate account can be taken out for the principal to inspect; but when such inspections are more or less frequent this locking and unlocking becomes a matter of difficulty, not to speak of the time wasted. The system of loose leaves has not got such a great advantage over the bound ledger as might appear at first glance. Less space and less waste of paper, and the ease with which accounts can be expanded and contracted are the only improvements. Such important features as balancing, inspection of individual accounts, and indexing remain the same.

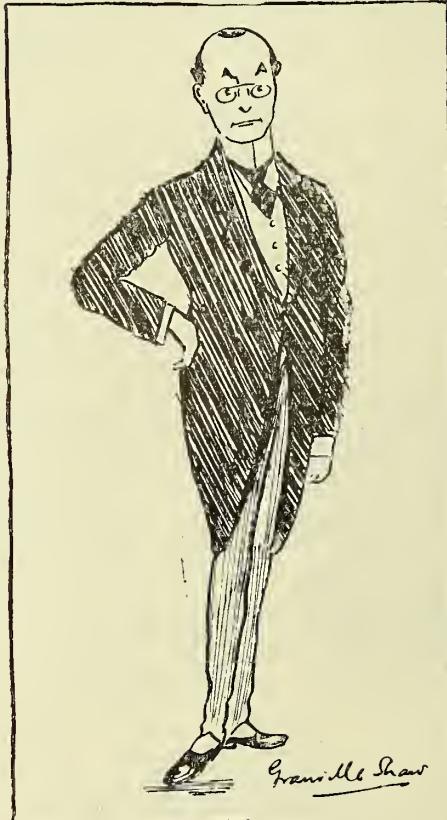
CARD-INDEX.

This system not only remedies all the faults of the preceding two, but goes far to perfect the system of bookkeeping itself. It is desired to open, say, fifty accounts. Taking the first card to hand, the name, address, date, amount, particulars, etc., are entered, and when completed the card is filed behind a tab or guide-card which bears the letter of the alphabet relative to that commencing the customer's surname. The other accounts are treated in exactly the same way until all have been entered, when we have a drawer containing fifty accounts all alphabetically arranged and never out of order. As business grows one simply adds fresh cards, filing them in their proper order. The number may be expanded to any extent without having to consider space or having extra trouble in tracing accounts. One important feature of the system is that accounts that have been closed—dead—can be instantly removed to the "dead" drawer, so that in one drawer can be kept together all the "live" accounts, which saves time when making out accounts or balancing. The advantages may be still further enhanced in the following

manner: The indexing occupying a prominent part in the system, any account can be turned up with great rapidity. Such accounts can further be split up into "Good," "Bad," or "Indifferent" customers, thus insuring against sending goods or giving credit to any classified as "Doubtful." The advantages thus outlined tend towards the great principles of business—economy of time and labour and accuracy in work. It should be mentioned that many business men regard the easy access to the drawer as a menace to the system. To this objection, all that can be said is that if a man is intent upon fraud or deception, not all the bound ledgers in the world will prevent him from carrying out his designs. Others assert that the cards can be more easily lost. That may be; but who is responsible? Is a business man going to be encumbered all his life because he is afraid a card may go astray?

W. A. MABEN.

Pharmaceutical Types.



Granville Shaw

II. The West-end Type.

IMMACULATE, unwaveringly severe;

Well versed in all that Harley Street delights

To foist on unprotected public year by year,

Be it the Story of the Phagocytes,

The Theory Opsionic, or the sour

Lacteal methods of a Metchnikoff.

He revels in the Serum of the hour;

A very learned "do-not-teach-me-toff."

That air detached, that manner calm, serene,

Can ne'er be taught by any printed book,

'Tis practice only, arduous and unseen,

Can make that genuflexion to a duke.

The end's the same, though reached in different

ways,

And East and West regard each in amaze.

ITALIAN GOVERNMENT QUININE.—The revenue obtained by the Italian Government from the monopoly sale of quinine during the financial year 1908-9 was 106,585*l.*, as compared with 80,444*l.* in 1907-8; the estimate for 1909-10 is 100,000*l.*

Photographic Notes.

(By a Pharmaceutical Camerist.)

Hypo-removing.

THE experiments of Dr. Hauberriser on the removal of sodium hyposulphite from prints by using warm water tend to show that a more perfect removal than can be effected with cold water is not attainable, but that the operation is completed in less time. In the days of albumen prints it was not unusual to employ warm water for washing, but the advent of gelatin prints altered some of the methods then in vogue.

Contrast with Amidol.

CONTRAST cannot generally be obtained by using amidol, but a customer of mine recently showed me some prints developed with the following which exhibit plenty of contrast :

Amidol	...	...	24 grains
Sodium sulphite, anhydrous	...	80 grains	
Sodium-bisulphite solution	...	1 oz.	
Potassium bromide	...	20 grains	
Water	...	24 oz.	

The Early Days.

MR. W. GAMBLE, at the Manchester School of Technology, is reprinting some of the papers published during the early days of photography, and which have been the starting-points of modern processes, or improvements in photographic practice. These reprints are intended for the use of the students at the school, but I understand that any interested person may obtain a copy by applying and enclosing a stamped envelope. The reprints should be of great educational value.

Negatives from Negatives.

DR. THIBAUT gives a process in the "Photo Revue" for making negatives from negatives which is rather different from the usual bichromate method. Instead of using the ordinary solution of potassium bichromate the following liquid is applied to the sensitive dry plate with a soft brush :

Copper sulphate	...	...	1 gram
Manganese sulphate	...	...	3 grams
Potassium bichromate	...	...	6 grams
Water	...	...	100 c.c.

Dissolve and filter.

The plate is exposed under the negative until the detail is visible at the back, and is then quickly washed until the washing water is colourless. Next the plate is treated with either hydroquinone or diamidophenol, and development is carried well through to the back. In the resulting negative right and left are reversed.

Combined Developing and Fixing.

CREMIER, in the "Photo Gazette," gives an improved process of developing and fixing at the same time. Hitherto the processes advised for doing this have been more or less failures, and it is to be doubted whether even given a successful process, photographers would adopt it to the exclusion of the present method of separate developing and fixing. However, the particular method under notice appears to have advantages over any other yet brought forward, its greatest advantage being the short time necessary to complete the operation. The formula suggested is—

Diamidophenol	...	...	1 gram
Sodium sulphite, anhydrous	...	5 grams	
Sodium - hyposulphite solution	...	10 c.c.	
(1-5)	...	...	100 c.c.

This is sufficient for plates up to about 7 by 5 in. The best results are obtained with plates which are fully exposed, but within certain limits the solution seems to automatically adapt itself to errors of exposure. It is not advisable to take the plate out of the dark room before fixation is complete, otherwise fog may be caused.

The length of time required is about fifteen minutes, and there is no need to rock the dish during the operation. A small quantity of a whitish precipitate is found on the film on removing from the bath, but is easily removed by wiping with wet cotton-wool.

Optical Observations.

By a Chemist-Optician.

Official Colour-tests.

WHILE naval men are agitating for a revision of the tests for colour vision, railway employés are complaining that the officials are making the tests too stringent. The Amalgamated Society of Railway Servants have issued a circular to their branches requesting further information on the subject. It is stated that there has never been an accident proved to be caused by defective vision or colour-blindness, and, if this statement is correct, the usual Holmgren test, which is the one commonly used, seems to have answered very well for railway purposes. At the same time it will be interesting to see what results are arrived at by the Committee appointed by the Board of Trade on this matter. It is to be hoped that the Committee's findings will lead to some standardisation of the methods, which at present have, at any rate in two cases, been proved to be the cause of considerable hardship to individual members of the service.

Testing for Myopia.

WHEN testing for myopia, the text-book rule is to give for constant wear a lens slightly weaker than the one put up in the trial frame. It is, however, an open question whether this is the best course, or whether it is better to give a full correction, at any rate for young people, where the degree of myopia is not too high. The retina is constantly trying to focus rays which have their focal point some distance in front of it, and it is the prolonged effort to bring about an impossible result that leads to the asthenopia which is such a troublesome feature of these cases. If, therefore, a lens is ordered which is weaker than the one required to bring the image exactly on the retina, the position is not very much better than the original one. It is really a question of being on the safe side, as there is real danger in overdoing it so that the focal point falls behind the retina, as, although the eye cannot contract to focus rays that are too short, it will soon endeavour to expand to reach those that are too long, and such a condition might in young people lead to the progressive myopia so much to be dreaded.

The Increase in the Use of Glasses.

IT is a sign of the increasing interest of medical men in optical matters that one finds the "British Medical Journal" publishing in one week two articles on sight-testing, and an editorial wherein is asked the question, "Is defective sight on the increase?" The reply is the usual one—that glasses are more worn because the existence of defective vision is more generally recognised and corrected than was the case a few years ago. The following reasons given in the "B.M.J." will interest chemists-opticians :

In the first place, the school authorities are examining thousands of children, and a certain proportion of those found to have defective vision eventually appear in spectacles. Again, both the profession and the public are becoming increasingly alive to the relations which exist between headache, asthenopia, and neuralgia on the one hand, and errors of refraction on the other. Ophthalmic surgeons have recognised the truth that small errors of refraction often produce more pain and eye-strain than gross variations from the normal. There is much less ignorance among the public with regard to the effect of spectacles than was prevalent in the past century. One does not so frequently hear that glasses destroy the sight, and that if spectacles are once used they can never be dispensed with. Again, the laity realise that many cases of squint are cured by a suitable correction of the refraction error. But when all has been done, even after the most careful correction of the optical error, a physiological defect is often present. It is a common thing to find that children who live in densely populated areas do not, even with a perfect correction, possess more than half the normal visual acuity ($\frac{1}{2}$). This amblyopia is probably of central origin, and recovery must in many cases take place, for slight amblyopia is not nearly so common among the parents of these children as among the children themselves. These partially amblyopic children are not in any way mentally or morally deficient—in fact, they are probably more highly developed mentally than similar children from country schools who are not so amblyopic.

Practical Notes and Formulae.

Deodorised Ichthylol.

DR. HELMERS ("Journal de Pharm. Liège") obtains a deodorised ichthylol by the following process: Mix 200 grams of ichthylol with 150 grams of hydrogen peroxide (10 per cent.) for forty-eight hours. Evaporate in a water-bath, add water to make up to the original weight, and ammonia until the product is neutral to litmus.

Terpine Elixir.

THE elixir of terpine of the French Codex deposits some of its terpine on keeping, owing to changes of temperature. M. Hérissey has investigated the subject, and finds that it is necessary to lower the amount of terpine from 1.25 gram to 1 gram in 100 grams of Garus's elixir. When made of this strength elixir of terpine is quite stable.—*Journ. de Pharm. et de Chimie*.

Theobromine and Sodium Salicylate.

ACCORDING to Patta ("Répertoire de Pharm."), who has analysed numerous samples of salicylate of theobromine and sodium, there is considerable variation in the solubility and theobromine content. Theoretically, there should be present 40 per cent. of theobromine. The best brands did not give indications of salicylic acid in aqueous solution until acidified by acetic acid, but other samples gave the reaction at once:

	Bayer	Merck	Knoll	Hoffmann La Roche	1	2	3	4	5	6	7	8	9	10
Solubility in chloroform	0.55	0.63	0.54	0.54	1.82	1.94	2.14	2.75	2.98	0.96	1.24	3.15	2.18	2.04
Theobromine ...	39.85	39.8	39.71	39.67	28.15	31.02	24.30	22.49	19.94	32.12	30.91	14.65	22.10	23.51

Solubility of Salts of Cinchona Alkaloids.

DR. G. I. SCHAEFER, of the New York Quinine and Chemical Works, gives, in the "American Journal of Pharmacy," the following table of the solubility of cinchona alkaloids and salts in water at 25° C. The figures indicate the parts of water required to dissolve 1 part of the substance:

Quinine alkaloid, 3,000
acetate, 50
anisol, 2,400
arsenate, 650
benzoate, 360
bilydrobromide, 5
bilydrochloride, 0.7
bilydrochloride with urea, 1
bisulphate, 8.5
chlorhydror sulphate, 1.3
chromate, 3,150
citrate, 825
glycerophosphate, basic, 850
hydrobromide, 43
hydrochloride, 21
hydroferrocyanide, 2,000
hydroiodide, 205
hypophosphite, 35
lactate, basic, 6
nitrate, 70
oxalate, 1,400
phosphate, 800
picrate, 3,400
quinate, 3.5
salicylate, 2,100
sulphate, 700
bi-sulpho-guaiaconate (guaiacum), 0.5
sulpho-phenate, 250
urate, 550

Quinine phenol sulphate, 630
tartrate, 950
tannate, 2,000
valerate, 80
Cinchonidine alkaloid, 4,800
bisulphate, 1
tetrasulphate, 3
bilydrobromide, 7
hydrobromide, 60
hydrochloride, 21
bilydrochloride, 1.6
salicylate, 1,320
sulphate, 92
fannate, 1,800
Cinchonine alkaloid, 8,800
bisulphate, 1.5
hydrochloride, 22
hydrobromide, 59
bilydrobromide, 1.8
salicylate (cryst.), 590
sulphate, 85
tannate, 1,100
tartrate, 32
Quinidine alkaloid, 6,900
hydrobromide, 190
hydrochloride, 86
hydroiodide, 1,220
salicylate, 1,650
sulphate, 95
tannate, 2,100
tartrate, 35
bitartrate, 310

Purification of Water.

M. DEBUCHY before the Société de Thérapeutique read a paper on a "Practical Means of Utilising Permanent of Potash for Disinfecting Water," in which he first outlined the various processes that have been pro-

posed for sterilising water. It is not often possible to employ heat where large quantities of water require to be purified, although that method is the best. Chemical means consist of adding oxidants such as chlorine, bromine, iodine, peroxides, alum, lime, etc., but these have been abandoned for various reasons. The most efficacious chemical to employ is permanganate, but M. Debuchy finds that the methods of neutralising excess of permanganate by the addition of hyposulphite of soda or carbonate of soda are inconvenient. He therefore suggests the employment of resorcin. To a litre of water he adds 0.03 gram of potassium permanganate, leaves it for from two to three hours, and then adds 4 m.g. of resorcin. The action is complete in a few minutes, as indicated by a change in colour, and the water is then filtered through cotton-wool or paper.—*Journ. de Pharm. et de Chimie*.

Plaster-assays.

MR. F. B. KILMER, in the "American Journal of Pharmacy," describes the processes of assaying plasters with rubber basis as practised in the laboratory of Messrs. Johnson & Johnson, plaster-makers. For belladonna plasters the process given in the U.S. Pharmacopœia (eighth revision) has been found "entirely satisfactory." Salicylic-acid plaster is assayed by the colorimetric method with ferric chloride, a measured quantity of a solution of salicylic acid of known strength being used for comparison. In assaying mercurial plaster the mass is dissolved from

the cloth with benzol or chloroform, and the mercury allowed to settle from the solvent. The supernatant benzol is poured off, and the slime of mercury powder dissolved by adding a little aqua regia and warming. As little acid as possible is used, and when the acid solution has lost all grey colour, which indicates that the mercury has been dissolved, more water is added, and the solution stirred and filtered. The mercury is then precipitated with sulphuretted hydrogen, washed, dried, and weighed. The mercury sulphide is calculated to mercury, and the weight of mercury found, multiplied by 100 and divided by the weight of the compound used, gives the percentage of mercury in the compound. For iron plaster, ignition of the plaster is first carried out, and the residue dissolved in hydrochloric acid, filtered, heated to boiling, and precipitated as ferric hydrate by ammonia. The precipitate is ignited to ferric oxide, which is calculated to metallic iron.

Easton's Syrup.

M. G. PEGURIER, Nice, in the "Bulletin du Syndicat des Pharmaciens des Alpes-Maritimes," gives the following as an improved formula for this preparation, the important point being that it keeps well:

Iron powder ...	...	...	...	8.6	grams
Concentrated phosphoric acid (sp. gr. 1.5) ...	...	...	...	62.5	grams
Strychnine, powdered ...	...	...	...	0.57	gram
Quinine sulphate ...	...	...	...	14.8	grams
Citric acid, powder ...	...	...	...	15.0	grams
Simple syrup ...	...	...	...	700	c.c.
Distilled water	...	...	...	a sufficiency	

Dilute the phosphoric acid with its own weight of water, place in a capsule and add the iron. Warm gently, carefully stirring the while. Add the alkaloids, and when they are dissolved filter into the syrup, to which add finally the citric acid and enough water to make a litre.

The syrup is recommended to be placed in yellow bottles of a capacity of from 90 to 125 c.c., entirely filled and sealed over with paraffin wax. M. Pégurier states that in this way he has kept the syrup unchanged for a year.

Alkaloidal Guaiacol Sulphonates.

DR. GEORGE I. SCHAEFER communicated to the New York Section of the Society of Chemical Industry on May 20 a paper on the "Alkaloidal Salts of Guaiacol-sulphonic Acids and Creosote-sulphonic Acid" ("J.S.C.I.", 1910, August 15, p. 928). The author states that very few of the long list of guaiacol and creosote compounds are of practical value in medicine, and among the most important of these are the salts of *o*-guaiacol-sulphonic acid with organic bases. This acid was first introduced in 1897 in combination with cinchona alkaloids. The preparation of *o*-guaiacol-sulphonic acid is given as follows :

Guaiacol is treated with an excess of concentrated sulphuric acid, whereby a mixture of guaiacol-sulphonic acids is obtained in various proportions. The thick, dark-red liquid is diluted with water, the excess of sulphuric acid removed by means of lead oxide, barium hydroxide, or other suitable base, and the mixture filtered off from the insoluble sulphates. The solution contains various guaiacol-sulphonic acids, which are neutralised with carbonates or hydroxides of potassium, barium, calcium, or other bases, and the solution is evaporated, leaving an impure product from which the pure salt of the *o*-guaiacol-sulphonic acid may be obtained by recrystallisation with a suitable solvent. From either of these pure salts the free *o*-guaiacol-sulphonic acid may be prepared by decomposition of a solution of the salt with an acid which forms an insoluble compound with the base, the free acid being filtered off.

The alkaloidal salts of *o*-guaiacol-sulphonic acid can be produced by neutralising the acid with the respective alkaloids and purifying the product by recrystallisation. Most of these salts are non-crystalline or crystallise with difficulty. Amorphous salts are obtained on evaporating the filtered solution at low temperatures or, preferably, *in vacuo*. In some cases the salts may be made by double decomposition between an easily soluble alkaloidal salt and a readily soluble *o*-guaiacol sulphone. The following notes on the *o*-guaiacol sulphones of the alkaloids in the better-known groups are abstracted from the communication :

Cocaine Group.—The cocaine salt forms a sticky mass or (on precipitation with ether from alcoholic solution and drying *in vacuo*) an amorphous powder easily soluble in water and alcohol.

Caffeine Group.—Caffeine does not form a real salt, pure caffeine crystallising from a solution of the alkaloid in guaiacol-sulphonic acid.

Cinchona Group.—Quinine *o*-guaiacol sulphone is light yellowish-grey and amorphous. It is sparingly soluble in water, but easily in dilute acids or alcohol. The acid salt, quinine di-guaiaacol sulphone or "guaiquin," is largely used, the anhydrous compound, $(C_6H_5O_2CH_2SO_3H)_2C_{20}H_{24}N_4O_2$, being somewhat hygroscopic, and it appears on the market with a few per cent. of water as an amorphous bright-yellow powder or in small lumps readily soluble in water and alcohol. It softens to a thick sticky mass at 80° C., and becomes liquid at about 130° C., with some decomposition. The basic and acid cinchonine, cinchonidine, and quinidine salts are all yellowish amorphous powders (the basic cinchonine salt can be obtained in a crystalline form), behaving similarly to the corresponding quinine salts as regards solubility: the cinchonine salt is the most soluble of the basic salts, of the group, then the cinchonidine salt, and lastly quinine and quinidine salts.

Opium Group.—Morphine *o*-guaiacol sulphone is a greyish-white, hygroscopic powder, very soluble in water and alcohol, slightly in ether and chloroform.

Codeine *o*-guaiacol sulphone, which is the most important of the group, has been largely used in medicine. It crystallises well in cubic crystals which do not contain any water of crystallisation, but the salt absorbs 1 to 2 per cent. of moisture from the air. The dry salt contains 59.44 per cent. of anhydrous codeine, and melts at 164° to 165° C. It is soluble in 95 parts of water at 25° C., and in 450 of alcohol. It is almost insoluble in ether and chloroform.

Ethyl-morphine *o*-guaiacol sulphone crystallises in white cubical crystals when the concentrated solution is allowed to stand for a long time. It can be prepared in powdered form by precipitating the alcoholic solution with ether and drying the precipitate at a low temperature or over sulphuric acid. Its solubility and reactions are similar to those of the codeine salt.

Diacetyl-morphine *o*-guaiacol sulphone is amorphous. It is very soluble in water and alcohol.

The acetyl-codeine salt forms white prismatic crystals (from alcohol at low temperatures) or a greyish-white powder. The

meconeine salt crystallises in beautiful long needle-shaped crystals, and the narceine salt in small indefinite crystals. These three are all water- and alcohol-soluble. The narcotine salt is amorphous and sparingly soluble in water or in excess of acid, but easily in alcohol.

Solanum Group.—The *o*-guaiacol sulphones of atropine, hyoscyamine, and hyoscyanine form amorphous sticky masses (when dried) greyish amorphous powders. They are best prepared by precipitation from alcoholic solution with ether.

Strychnos Group.—Brucine *o*-guaiacol sulphone crystallises readily from water in indistinct small white crystals, separating slowly but almost quantitatively on standing. It is anhydrous when dried at 80° C., and the dried salt requires 500 parts of water and 800 parts of alcohol for solution at 25° C., and 30 parts of boiling water. The solubility is greatly diminished below 25° C. The methyl-brucine salt forms small cubical crystals sparingly soluble in cold alcohol, more readily in water, easily in hot alcohol or water.

Strychnine *o*-guaiacol sulphone separates from the concentrated aqueous solution (or from alcoholic solution on addition of water) as a thick yellowish liquid. On evaporating its aqueous solution slowly at ordinary temperatures some crystalline salt forms at the sides of the dish, but the greater part is obtained as a sticky amorphous mass, from which more crystals can be obtained on redissolving and again evaporating. It is somewhat soluble in water, freely so in alcohol, and an excess of acid diminishes the solubility of the salt in water.

Methyl-strychnine *o*-guaiacol sulphone crystallises in distinct needle-shaped crystals sparingly soluble in cold water and alcohol, but easily when slightly warmed.

The great difference in the solubility of the *o*-guaiacol-sulphonates of strychnine and brucine in alcohol led the author to experiment on them as offering a favourable method for the separation of the two alkaloids. It was found, however, that guaiacol sulphone of brucine is retained in solution even in the proportion of 1 in 20 when equal parts of both alkaloids dissolved in alcohol are neutralised with *o*-guaiacol-sulphonic acid, and thus that it is not possible to separate the alkaloids by means of alcohol. Investigations are to be carried out in order to see if any other solvent is adapted for this purpose.

The Salts of Creosote Sulphonic Acid are also briefly dealt with, but since creosote is a mixture of phenols it yields on sulphonation a mixture of sulphonic acids, and in combination with an alkaloidal base a mixture of alkaloidal salts. Codeine creosote-sulphone is a white crystalline stable powder, with a lower, but not distinct, melting-point, and of greater solubility than codeine *o*-guaiacol-sulphone. The salts of creosote sulphonic acid with other alkaloids are all less easily soluble, and being mixtures cannot be produced in uniform crystals, and they are obtained in powder-form (amorphous or crystalline) by evaporation of aqueous or alcoholic solutions or precipitation of the alcoholic solution with ether.

Business Changes.

Notes for this section must not be in the nature of advertisements, and they should be authenticated when sent to the Editor.

MR. W. A. LOW, chemist, Portslade-by-Sea, has opened a branch business at Southwick, Sussex.

MR. MCKIE, chemist, Churchfield Road, Acton, London, W., is removing to larger premises in the same road.

MESSRS. LAKE, MILLAR & CO. will shortly remove from 68 Villa Road to 77 Hamstead Road, Handsworth.

MESSRS. WHITE & CO., of Gravelly Hill, Birmingham, have opened a branch drug-stores at 4 Deykin Avenue, Witton, Erdington, near Birmingham.

MR. A. HIGGS, chemist, Kingston-on-Thames, has purchased the old-established pharmacy of MR. P. L. PALMER at Sheen Lane, East Sheen, London, S.W.

MR. EDWARD A. NAYLOR, chemist and druggist, has disposed of his business at 41 Church Road, Higher Tranmere, Birkenhead, to MR. THOS. S. JONES, pharmacist.

MR. DIXON, chemist, of South Kensington, London, S.W., has purchased the business of the late MR. F. R. BESSANT, Ph.C., at 2 St. Mildred's Road, Westgate-on-Sea.

MR. F. E. ROOKLEDGE, Ph.C., has sold his business in Market Place, Easingwold, Yorks, to MR. T. TYERMAN STURDY, pharmacist, who has businesses at Worksop and Wentworth Woodhouse also.

Reviews.

The Sale of Food and Drugs. By Sir W. J. BELL. 5th edition, by C. F. LLOYD. The chemical notes revised and enlarged by R. A. ROBINSON, Barrister-at-Law. Pp. xi + 303. 8s. 6d. net. (London : Butterworth & Co.)

THE fourth edition of this work was published seven years ago, the authorship being then ascribed to Bell, Scrivener, and Lloyd. In the present edition Mr. Lloyd has taken over the editorship, and the chemical notes have been done by Mr. R. A. Robinson, barrister-at-law. There is a good deal of matter outside the scope of the Sale of Food and Drugs Acts in the present edition; for example, the text of the Oil in Tobacco Act is given, as well as such statutes as the Adulteration of Seeds Act and the Fertilisers and Feeding-stuffs Act. Before dealing with the work in detail, it may be said generally that this is the best commentary on the Sale of Food and Drugs Acts that has been published. It is up-to-date, and ably deals with all the other Acts of Parliament which have any direct bearing on the adulteration of foods and drugs. The fifty or so reported cases decided by the Appeal Courts since 1903 are dealt with, and it is not an exaggeration to say that every reported case of any importance since the passing of the 1875 Act is mentioned. A useful feature is the inclusion of a number of circular-letters issued by Government Departments to public officials, and suggested standards in reference to substances containing preservatives, etc., made by the Departments concerned. In general arrangement the book remains as it was in the last edition. Passing on to matters of detail, it is naturally the drug cases which interest the pharmacist. The decision *Bundy v. Lewis* has been hard to understand. It will be remembered that in this case the inspector asked for paregoric, and was served with a bottle labelled "Paregoric substitute," but wrapped in an opaque wrapper, and without verbal disclosure. The assistant was unqualified, and therefore might not sell opium or its preparations. The judgment of the High Court stated that on the special facts of the case there was no prejudice to the purchaser. The author submits that this case, as reported, is valueless as an authority. The most interesting part of the statutes is, of course, Section 6 of the 1875 Act. On p. 26 we find the sub-heading Drugs, which opens with the remark: "The question often arises whether the British Pharmacopœia has fixed an absolute standard for drugs." It is to be regretted that this part of the work is a verbatim reproduction of the 1903 edition, without any new matter at all. *White v. Bywater*, *Dickens v. Randerson*, and *Boots v. Cowling* are discussed, leading up to the author's conclusion that "the standard of the British Pharmacopœia is not conclusive, but that very strong evidence is necessary to displace it." The case of *Hudson v. Bridge* is inadequately dealt with. The decision here is made to rest on the basis of the following dictum:

"The British Pharmacopœia must state clearly the composition of the article. The King's Bench Division held that there is no standard for the drug."

If the decision in this case were based on the failure of the Pharmacopœia to state in terms what the composition of the article was, it would bring an enormous proportion of the drugs of the Pharmacopœia within *Hudson v. Bridge*, and so escape conviction. In this case it is very necessary to examine the judgment in combination with the evidence. It was proved that it was not possible to determine by analysis whether the deficiency of acetic acid arose from imperfect compliance with the process of manufacture as prescribed by the British Pharmacopœia, and that it was possible that the whole deficiency might have been caused by the subsequent process of decomposition. That was the basis of the decision. Indeed, the case was taken advantage of by the defence to prove the correctness of Mr. Glyn-Jones's contention that the certificate requirement as to articles liable to decomposition applies to other things than milk and butter. Before he went to the Bar he failed to convince a magistrate that his contention was right, but the High Court sustained it as regards *acetum scillæ* in

Hudson v. Bridge. Other points in the case were incidental, and subordinate to that main contention. *Knight v. Bowers* is a difficult case. Here saffron was asked for, and, apparently through a failure to catch the word used, savin was supplied. A conviction, however, followed, and this case has been set up as an authority for the statement that if an article sold is altogether different from that which was demanded by the purchaser, it is an offence under Section 6. On p. 250 a short commentary on the adulteration of drugs is found. The conclusions arrived at are as follows:

"There are no standards of quality laid down in the Acts for drugs, and they contain no provision making the British Pharmacopœia a standard for such drugs or medicines as are specified therein."

"The British Pharmacopœia, which is somewhat restricted in its scope, and is essentially intended to establish a uniform standard of strength and composition of drugs for the use of the medical profession in prescribing for their patients, could not be expected to include and govern the great variety of medicinal preparations which are prepared and sold under various names for domestic use. When, however, any British Pharmacopœia medicine is asked for, especially in the exact terms of the description given of the same in the Pharmacopœia, it is usually necessary that the person should be supplied with the article prepared according to the formula given therein. . . . But this is not the case unless the British Pharmacopœia states exactly what the constituent parts of the article should be. See *Hudson v. Bridge*, *ante*, p. 26."

The last statement is, in view of the explanation we have given, incorrect, and we hope the editor will look into the matter and revise his statements on this case before another edition of the book is published.

New Books.

Any of these books printed in the United Kingdom can be supplied, at the published price, to "C. & D." subscribers on application (with remittance) to the Publisher, 42 Cannon Street, London, E.C. These notes do not exclude subsequent reviews.

Duckworth, Lawrence. *A Précis of the English Law affecting Landlord and Tenant.* 3rd edit. 7x4½ in. Pp. 191. 2s. net. (Wilson, 54 Threadneedle Street, London, E.C.) [The original edition of this book was published in 1904, and the second in 1906. The present brochure embodies in an appendix recently enacted statutes such as the Law of Distress Amendment Act and the Agricultural Holdings Acts, while later decisions in the Courts which have elucidated obscure points are referred to. The book is useful alike to tenant and landlord.]

Gadd, H. Wippell. *Synopsis of the British Pharmacopœia and of the Poison Laws of Great Britain and Ireland.* 7th edit. 4½x2½. Pp. 227. 1s. net. (Baillière, Tindall & Cox, 8 Henrietta Street, London, W.C.) [Mr. Gadd's convenient Synopsis was first published in 1908, and has now reached the seventh edition. The chief alteration in the new edition is the revision of the section dealing with pharmacy law, a poison-schedule in accordance with the Poisons and Pharmacy Act, 1908, being given. It is a book which many students carry with them, its size making it convenient for referring to at odd moments.]

Hardwicke, W. W. *Sight-testing made Easy.* 2nd edit. 7½x4¾. Pp. 86. 2s. 6d. net. (Churchill.)

Martindale, W. Harrison. *Organic Analysis Chart.* 6½x4. Pp. 80. 3s. 6d. net. (H. K. Lewis, 136 Gower Street, London, W.C.) [Dr. Martindale entitles this a Supplement to the Extra Pharmacopœia. First is given a chart for the recognition of organic chemical bodies used in therapeutics, and this is followed by a table showing the result of about eighteen tests on 319 organic substances, including the large class of "new remedies." The last few pages are devoted to confirmatory tests. Those who are called upon to identify organic substances will find the chart of great utility; there has been nothing of the kind published before in such a convenient form. The book is printed on green paper and bound in leather.]

Mitchell, C. Ainsworth. *Oil—Animal, Vegetable, and Mineral.* 7x4½. Pp. viii+128. 1s. 6d. net. (Pitman.) [A compact and, as far as it goes, accurate account of essential, fixed, and mineral oils, where they come from, and what they are used for. The book should be serviceable to retail chemists who require merely general information.]

Tschirch, A. *Handbuch der Pharmakognosie.* Parts 17 and 18, concluding the first volume. m.2 each part. (Tauchnitz, Leipzig.)

Trade Report and Market Review.

The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers stock the goods. Qualities of chemicals, drugs, oils, and many other commodities vary greatly, and higher prices than those here quoted are obtained for selected qualities of natural products even in bulk quantities. Retail buyers cannot, therefore, for these and other reasons, expect to purchase at these prices.

42 Cannon Street, London, E.C., August 18.

THREE are few important variations in values to report this week, and the amount of business in the aggregate is but small, as is usual in August. In the heavy-chemical markets, however, business is fairly brisk at the principal centres, and the general demand good. The chief alterations in prices include an advance in soda tartarata and pulv. seidlitz. Cream of tartar and tartaric acid are also very firm, the foregoing articles being influenced by the rise in raw materials, as the result of exceedingly poor European vintages. Citric acid and quinine are both flat, the latter being a trifle easier in second-hands. Copper sulphate is firmer, and quicksilver has declined in second-hands. In drugs and oils, new chamomiles are firm. Castor and Rufisque nut oils are cheaper. American peppermint oil is distinctly firmer, as is menthol. Dutch rose-petals are held for an advance. Serpentine is easier, and both ergot and jalap firm. In miscellaneous articles, shellac is quiet and a shade easier, turpentine firm, and rubber dull. The chief alterations have been as follows :

Higher	Firmer	Easier
Hydrastis	Ammonia sulphate	Castor oil
Peppermint oil (American)	Cod-liver oil	Nut oil
Pulv. seidlitz	Copper sulphate	Opium
Rose petals	Menthol	Quicksilver (seconds)
Soda tartarata		Serpentine
		Soy

Cablegram.

NEW YORK, August 18.—Business in drugs is fair. Opium is easy at \$5.25 per lb. for druggists by single cases. Peppermint oil in tins is 10c. per lb. higher at \$1.90. Cascara sagrada is unaltered. Hydrastis (golden seal) has advanced a further 10c. to \$2.20 per lb. Jalap is steady at 38c. Curaçao aloes is firmer at 8c. Spearmint oil has advanced to \$2.25, and oil of wormwood to \$6.50 per lb.

Heavy Chemicals.

The general demand for both main and miscellaneous products shows an appreciable improvement, and the market generally has a very steady tone. New business is better, whilst the calls against existing contracts have been a good average, and these remarks apply both to home and export trade. An increase in inquiries on forward account is also to be noted, but it is rather early yet for the closing of the more important contracts. Prices all round remain on the steady side.

ALKALI-PRODUCE.—A heavier demand in this branch, particularly for high-strength caustic soda, bleach, ammonia alkali and saltcake, hyposulphite of soda, and soda-crystals is being felt, and values are on the firm side.

SULPHATE OF AMMONIA rules firmer, and prices show some improvement. Transactions are mostly confined to prompt and near requirements, as higher figures are asked for forward. Present nearest figures are : Beckton prompt, 25 per cent. ammonia guaranteed, filled into buyers' single bags at Beckton, 11*l.* 15*s.* to 11*l.* 16*s.* 3*d.* net cash; London, 24*1*/₂ per cent., 11*l.* 8*s.* 9*d.* to 11*l.* 10*s.* net cash; Leith, 12*l.* 5*s.*; Hull, 11*l.* 18*s.* 9*d.* to 12*l.*; and Liverpool, 12*l.* to 12*l.* 1*s.* 3*d.*

BENZOLS are on the steady side, with a fair inquiry. Present naked prices, 90 per cent., 6*d.* to 6*1*/₂*d.*, and 50 per cent., 7*d.* North, 5*d.* to 5*1*/₂*d.* and 6*d.* respectively.

LEAD-PRODUCTS are not fluctuating much, though the tone is steady, with a fair average demand. White lead, 16*l.* 5*s.* and red lead, 15*l.* to 15*l.* 5*s.* per ton Tyne; white acetate of lead,

22*l.* 10*s.* to 22*l.* 15*s.*; brown acetate of lead, 20*l.* 10*s.* to 20*l.* 15*s.*; nitrate of lead, 25*l.* 15*s.* to 26*l.*, all per ton, less 2*1*/₂ per cent. Glasgow.

Manchester Chemical-market.

August 16.

There appears to be a consensus of opinion as to the improved conditions in the chemical-trade. There is a better inquiry in most departments, and when the holidays in Lancashire come to an end, the improvement should be more pronounced. Bleaching-powder is now quoted at from 4*l.* 5*s.* to 4*l.* 10*s.* per ton, softwood casks, on rails. High-strength caustic soda continues in good demand, and soda-crystals are selling more freely. Refined sulphate of soda is firmer at 2*l.* 10*s.* to 3*l.* per ton on rails. Acetate of lime is very firm, but so far there is not much change to note in quotations. There is a shade steadier feeling in white powdered arsenic. Flowers of sulphur are dearer at 7*l.* 10*s.* to 8*l.* per ton in 2-cwt. bags on rails, makers' works. Sulphate of copper continues to advance, especially for forward delivery, as the position of the raw material remains uncertain. Cream of tartar and acids sell at full late rates, although oxalic is somewhat quiet. Coal-tar products are rather slow generally, but sulphate of ammonia is firm at 11*l.* 17*s.* 6*d.* per ton on rails, Manchester.

Continental Drug and Chemical Markets.

ACETANILIDE.—Cheaper offers have been current for some time past, especially in the wholesale market, where prices range from m.170 to m.180 per 100 kilos. Production still appears to be excessive, and in the circumstances a further sagging of prices is probable.

AGAR-AGAR.—Offers have been on a freer scale. These, however, included many inferior qualities, and prices were generally on a lower basis, while extra white on the way could possibly be secured at m.380.

CITRIC ACID.—The expectation was pretty general as to a larger consumption in the summer months; true, this was realised in June, but the outlet since has suffered a contraction, owing to adverse weather conditions. Offers were thus accelerated, but met with little interest, and the tendency became dull and heavy; prompt parcels and forward delivery can be secured at easier rates.

DEXTRIN has been more active the last few weeks, and the hope is held out that until the opening of the new season satisfactory prices will be realised. Forward business for the new season "hangs fire," as no idea can be formed as to future values; prompt parcels are quoted m.27 to m.28 per 100 kilos.

GLYCERIN.—A fairly brisk business has been put through during July in distilled as well as refined, both in the wholesale and the retail trades. The impression is gaining ground that prospects of cheaper prices for the article are more remote than ever, whereas on the contrary the autumn and winter months may easily afford an opportunity to further raise prices.

GUARANA.—A small parcel of about 500 kilos. arrived on the Hamburg market, and was eagerly taken up by consumers on the basis of m.20 per kilo. Stocks everywhere are low.

GUM ACACIA.—In the last few months all qualities have been appreciably strengthened in value; the advance more particularly favoured the better grades. The latter have become scarce, and it is now no longer possible to expect parcels of new crop. An advance has also been recorded in the genuine sorts, which are held back by importers, who are hoping to realise still higher prices in the course of the year.

HYDRASTIS is still wanted at high prices. Hamburg stocks are very small, and nothing is obtainable under m.20 per kilo. Prompt shipment from America is offered at m.19.25 per kilo.

JUNIPER-BERRIES.—Italy has already entered the market, offering new crop for September delivery at low prices compared with last year, while reports agree that a good crop has been secured. As to the yield in other countries, there is nothing reliable known; therefore buyers of large quantities are holding back, pending developments.

QUILLAIA.—The market has further hardened, m.46.50 and more per 100 kilos, having been paid for future delivery. Whole on the spot (Hamburg) is not offered below m.48; cut

is still unchanged at m.59 to m.64, according to quantity, which is considered cheap.

SODA HYPOSULPHITE.—Makers are fully occupied, and the output for this year has been mostly contracted for. A good outlet is found in the home trade, and the export demand is also brisk, so that prospects are good for next year. The wholesale price is m.11 to m.12 per 100 kilos.

London Markets.

ACID, TARTARIC.—is very firm, with a fair trade demand at the previous rate of $9\frac{3}{4}d.$ per lb. for foreign, and for English $10d.$ to $10\frac{1}{4}d.$ is quoted.

ACONITE.—German is quoted at from 45s. to 47s. 6d., and Spanish at 37s. 6d. per cwt. c.i.f.

ALOES.—Of Curaçao 200 boxes new crop have arrived. Eleven packages have also arrived from Algoa Bay and 25 from Mossel Bay.

ARROWROOT.—At auction 21 cases Natal were offered and sold at $9\frac{1}{4}d.$ per lb., and 103 barrels St. Vincent were bought in at 2d. for fair manufacturing.

ASAFETIDA.—A new parcel of about 50 cases from the Persian Gulf will be offered next week.

BENZOIN.—The arrivals comprise 20 cases Sumatra of fair quality and 8 cases Siam, including bold almonds to small grains. There is a fair demand for good Sumatra seconds, stocks of which are low.

BUCHU.—Fourteen packages have arrived from Cape Town per *Kildonan Castle*; of which 7 are in transit for New York and the balance presumably for London. Privately there has been a fair inquiry, with small sales of round green at 7s. 6d., longs at up to 2s. 4d., and for fair green ovals 2s. 6d. is wanted, sales of yellow having been made at 2s. 3d.

CANTHARIDES.—New Russian are offered at 3s. per lb. c.i.f.

CHAMOMILES are firm, new Belgian of first pickings offering at 72s. 6d. per cwt. c.i.f. Rain has somewhat interfered with the gathering of the crop.

CHILIES.—At auction 69 bags Nyasaland sold at from 50s. to 52s. 6d. for fair bright red mixed, and 47s. to 49s. for dull to fair red.

CINCHONA.—Further particulars in regard to the Amsterdam auction to be held on August 25 show that the 11,720 bales and 994 cases to be offered weigh about 1,148,384 kilos. and contain the equivalent of 69,920 kilos. quinine bark. The manufacturing bark weighs 1,046,714 kilos. and the pharmaceutical bark 101,670 kilos. containing 66,522 kilos. and 3,398 kilos. of quinine respectively. At the London auction on Tuesday 398 packages were offered, and 190 found buyers at the previous unit of $7\frac{2}{3}d.$ per lb. Of East Indian, 113 bales offered and 72 sold at $3\frac{2}{3}d.$ for *Officinalis* stem chips, $2\frac{2}{3}d.$ to $2\frac{1}{2}d.$ for root ditto, 2d. to $2\frac{1}{2}d.$ for hybrid branch, and $1\frac{1}{2}d.$ to $1\frac{7}{8}d.$ for root. Of Java bark 279 bales offered and 119 sold, including *Ledgeriana* stem chips $3\frac{2}{3}d.$, branch ditto $2\frac{2}{3}d.$ to $3\frac{2}{3}d.$, root ditto $3\frac{2}{3}d.$, hybrid stem chips 2d., root ditto $3\frac{1}{2}d.$ per lb. The shipments from Java to Europe during the first half of August amounted to 1,032,000 Amst. lb., against 752,000 Amst. lb. for the same period of 1909.

CLOVES.—At auction 11 cases Penang were bought in at from 1s. 4d. to 1s. 6d. for good to fine Penang; 50 bags Madagascar were also bought in at $6\frac{1}{2}d.$ for good bright. Privately spot sales of fair Zanzibar have been made at $5\frac{3}{4}d.$ per lb. Little business has been done for shipment or delivery; sellers of January-March shipment quote 5s. 6d. c.i.f., and October-December delivery at $5\frac{3}{4}d.$

COCCULUS INDICUS.—The spot market has been cleared, up to 14s. having been paid, but nothing further is to be had at this price; nothing is offered for shipment at the moment.

CORIANDER-SEED is firm at from 10s. 6d. to 11s. per cwt. for weevilly Morocco, and from 12s. 6d. to 13s. for good sound.

CREAM OF TARTAR firm, with a fair business at the established prices of 79s. for 98-per-cent. and 77s. for 95-per-cent.

CUMIN-SEED.—Malta, of which there has been a good

crop, is offered at 40s. spot, and for ordinary to good sifted Morocco from 34s. to 37s. 6d. is quoted.

DRAGON'S-BLOOD.—A parcel of so-called Zanzibar drop (about a ton) has arrived. Privately small sales continue to be made of Singapore lump at up to 11s. 5s. for the best.

ERGOT is firm at 1s. $5\frac{1}{2}d.$ to 1s. 6d. per lb. c.i.f. for Russian, and good sound on the spot is offered at 1s. $5\frac{1}{2}d.$ net.

FENUGREEK-SEED.—New crop Morocco, which is mostly poor in colour owing to rain-damage, is firm at 9s., and for sound old crop, which is much better quality, 10s. 6d. to 11s. per cwt. is wanted.

GAMBOGE.—About 40 cases have arrived this week, part of low Saigon quality. Good Siam pipe with bright orange fracture is worth 13s. 15s., and Siam and Saigon mixed, partly drossy pipe is offered at 13s. 10s.

GINGER.—At auction 261 bags good washed rough Cochin were bought in at 52s., and 155 packages Jamaica were also bought in.

GUINEA GRAINS are extremely scarce on spot, about the only holder asking 92s. 6d., but to arrive 82s. 6d. c.i.f. is quoted.

HYDRASTIS is again 3d. per lb. dearer, holders now asking 9s. per lb. net on spot; quite a large business was done previous to the advance. New York quotes \$2.20.

INDIARUBBER has been quiet, closing with sellers at 9s. per lb. for hard fine Para on the spot and near.

INSECT-FLOWERS are cheaper, open flowers offering at 65s., half-closed at from 80s. to 90s., and small closed at from 100s. to 110s. per cwt. c.i.f.

IPECACUANHA.—The *Asturias* from Monte Video has brought 25 packages Matto Grosso and 24 packages "roots" from Bahia, the latter probably being Minas. Holders of Cartagena ask from 5s. 10d. to 5s. 11d. Minas 7s. 9d. and Matto Grosso 8s. 3d. per lb.

JALAP is firm at from 1s. 9d. to 1s. 10d. per lb. spot for 10 per cent., and to arrive business has been done at slightly below these figures.

MENTHOL is firmer, spot holders of Kobayashi asking 9s. 6d. per lb., business having been done at 9s. 2d. to 9s. 3d., and Yazawa at 9s. 1d. There is said to be practically no stock in Japan, and the new will not be available until November-December.

NUT OIL is cheaper to buy, "extra" Rufisque offering at 44s. 6d. per cwt.

OIL, BERGAMOT, remains quiet at from 14s. 6d. per lb. c.i.f. and upwards.

OIL, CASTOR, has further declined, Hull make of first pressing offering at 30s. 7s. 6d. per ton in barrels for prompt delivery and 30s. 12s. 6d. for September-December, delivered free on wharf. Belgian is also easier at 30s. 10s. for prompt for first pressing, ex wharf London.

OIL, COD-LIVER.—Our Bergen correspondent writes on August 15 that the market is very quiet, but holders are apparently firm at from 100s. to 101s. per barrel c.i.f. terms for finest non-congealing Lofoten oil. The exports from Bergen up to date amount to 5,800 barrels, against 8,100 barrels at the same date of last year. In London most of the agents are now asking an advance of about 3s. per barrel, the quotations for finest brands being from 103s. to 105s. c.i.f. for prompt shipment, business having been done at these figures.

OIL, EUCALYPTUS.—The *Patroclus*, from Melbourne, has brought 181 cases. B.P. quality is offered on the spot at from 1s. to 1s. $1\frac{1}{2}d.$ per lb., according to cineol content.

OIL, LEMON, remains unaltered and quiet at from 3s. 4d. to 3s. 6d. per lb. c.i.f. According to a Sicilian advice of August 6, the demand for summer consumption has been below normal, as the result of the inclement weather, and the demand for prompt shipment has been almost non-existent. At the close letter advices from Sicily report sales of a few parcels at better figures. Should any demand set in from abroad, a firmer tendency may take place.

OIL, ORANGE, remains unchanged, *sweet* offering at from 5s. 8d. per lb. c.i.f., and *bitter* at 6s. upwards.

OIL, PEPPERMINT.—The market for Wayne County tin oil in the United States has assumed a much firmer tone, inasmuch as several orders cabled out have been refused,

the lowest price for good brands to arrive being 8s. 3d. to 8s. 6d. per lb. The crop is said to be uncertain and prices irregular. H.G.H. bottled oil has moved up in sympathy, and spot holders ask 10s. 9d. to 11s. per lb. London terms.

OIL, STAR ANISE.—Business has been done at 4s. 7d. per lb. spot.

OILS, FIXED.—*Turpentine*, after slight fluctuations, closes firm at 50s. 3d. for American on the spot. *Linseed* is firm and dearer at 39s. 6d. for pipes, and 39s. 9d. for barrels. *Rape* is 3d. firmer at 26s. 9d. for ordinary brown crude, 30s. for English refined in casks, and 25s. 6d. for *Jamba*. *Crude Cotton-seed* is quoted 33s. 6d., ordinary pale refined 30s. 9d. to 31s., and sweet edible 38s. 6d. per cwt. Both *Cochin* and *Ceylon Coconut* are unaltered at 50s. and 42s. per cwt. respectively on the spot. *Lagos Palm oil* is 34s. 9d. and *Liverpool* 34s., and *Petroleum* 5½d. to 5¾d. for *Russian*, 5¾d. to 6½d. for *American*, and 6¾d. to 7½d. per gal. for *water-white*.

OPIUM.—The tone is somewhat easier in *Smyrna* this week owing to the absence of business, the nearest quotations being from 10s. 3d. to 10s. 4d. per lb. c.i.f., and on the spot the quotation for druggists' is unaltered at 12s. per lb. for 10¾ per cent.

Writing on August 5, a *Smyrna* correspondent reports an active week, about 150 cases being sold for all markets and for speculative account at an advance of fully 9d. per lb. Practically every description offered was bought up, and the slight steady advance asked at each purchase was willingly responded to by buyers. The quotations are: New current t.q., 9s. 6d. to 10s.; new *Karahissar*, 9s. 9d. to 10s. 6d.; new *Yerli*, 9s. 6d. to 12s., as to quality. Arrivals in *Smyrna* to date amount to 1,858 cases, against 817, and in *Constantinople* to 1,390 cases, against 646. Writing on August 6, another *Smyrna* correspondent reports that the sales amounted to 118 cases, closing at 98 piastres, or 11s., c.i.f., for good *Karahissar*. In addition to these official sales, 50 cases of secondary quality changed hands at various prices, most of the buying being for *England*. The harvest which is now concluding in various localities is not giving the yield anticipated. Holders who had been getting rid of their stock, hoping to replace later at lower prices, have been disappointed, and are resorting to speculation, which has had the effect of advancing prices in the interior. Under the same date a third *Smyrna* correspondent informs us that a fresh advance took place, which was as much due to the needs of pressing buyers as to the effect of native speculation, the prices quoted in *Smyrna* being lower than those asked by cultivators in the interior, who, being kept well informed of the activity of the export markets, have become intractable. The sales comprise 102 cases extra *Karahissar* t.q. at the equivalent of from 10s. 6d. to 11s. 1d., and 74 cases "primo" *Karahissar* t.q. at 10s. 2d. per lb. c.i.f. European ports, of which 21 cases were for local speculators.

Reviewing the month of July, a *Smyrna* broker states that at the opening a large business was done, and after selling some lots at 9s. to 9s. 2d., holders raised their prices by 3d. per lb., and buyers continuing to respond, the market gradually advanced to 9s. 6d. to 10s. as to quality, bringing up the number of baskets sold to 554. Market closes very firm at 9s. 6d. to 10s. 3d., with buyers and no sellers. The stock is about 491 cases, against 1,485 at even date last year, and in *Constantinople* 561, against 243.

OTTO OF ROSE.—Several agents have received prices of new crop this week, and their principals report the *Bulgarian* market as firm, with buyers eager to secure supplies. For oil guaranteed to pass *Parry's* analysis from 30s. 6d. to 31s. per Turkish oz. is quoted.

PEPPER (BLACK).—At auction 20 bags good small *Ceylon* were bought in at 3½d.; privately fair *Singapore* is offered at 4½d. per spot, and for arrival the sales include September-November shipment at 3½d. and October-December at 4d., and *Lampung* for September-November 3½d., and October-December at 3½d. c.i.f. d/w.

PEPPER (WHITE).—At auction 18 cases bold washed *Singapore* were bought in at 9d., and fair brownish at 7½d. Privately fair *Singapore* is offered at 7½d. spot, and for arrival the sales include September-November shipment at 7½d. to 7d., with sellers of *Penang* for October-December at 6½d. c.i.f. d/w.

PIMENTO.—At auction 244 bags fair were bought in at 2½d. per lb.; sellers to arrive quote 20s. 6d. c.i.f.

PULV. SEIDLITZ.—The makers announce an advance of 4s. per cwt., the quotation for English in 5 cwt. casks being 55s., and in 28 lb. parcels 57s. 3d. per cwt.

QUICKSILVER.—Although first-hand remains unaltered at 8s. 12s. 6d. per bottle, second-hand has declined to 8s. 5s., which gives an unsettled feeling to the market.

QUININE remains very flat, and in view of the extremely large bark auction at *Amsterdam* next week, the tendency in second-hands is easier, the usual brands of German sulphate being obtainable at 6½d. to 6¾d., makers quoting 7½d. and *Amsterdam* 6½d. per oz.

At the auction held at *Amsterdam* on August 12, 1,417½ kilos. Ed. II. were offered, of which 1,276 kilos. sold at an average price of 10.20fl. per kilo., against 10.20fl. at the previous auction. The next auction will be held on September 2, and will also consist of 1,417½ kilos. Ed. II.

ROSE-PETALS.—Holders are asking the higher rates of 2s. per lb. for new Dutch.

SARSAPARILLA.—The arrivals comprise 11 bales grey *Jamaica*, seven bales Native and 19 of *Honduras*.

SENEGA is dull and easier at from 1s. 11d. to 2s. per lb. on spot or forward.

SERPENTARY is a trifle easier, holders offering at 2s. 2d. per lb. net on the spot, and to arrive at 1s. 10d. per lb. c.i.f.

SHELLAC has been dull almost throughout, the value of fair orange TN being from 85s. to 86s. spot. Futures are easier, the small sales including October delivery at 89s., and December at 91s. to 88s.

SODA TARTARATA.—The makers announce an advance of 4s. per cwt., the price of English powder or crystals in 5 cwt. casks being 64s., and in 28 lb. parcels 67s. per cwt. The rise in raw material following on the poor results of the French vintage is responsible for the advance.

SOY.—About 100 packages have arrived from *Hong Kong*; prices are slightly easier at from 1s. 3½d. to 1s. 4d. per gal., duty paid.

SPERMACETI.—A sale of 49 cases *Chilian* refined is reported from *Liverpool* at 1s. per lb. in store.

SULPHUR.—The new law regarding the Sicilian sulphur *Consorzio*, which was passed at the end of July last, provides that no new sulphur mines can be opened in Sicily unless the parties prove to the satisfaction of the Government Mining Office at *Caltanissetta* that they possess the financial means and technical capacity for rationally working the mine. This is the first occasion that any limitation in the working of sulphur mines has been introduced. Several large mines are inactive at present, and the production during the next 12 months tends to become smaller. The large increase in shipments during the past 12 months has principally been to the wine-growing countries, and the production and consumption has about balanced, while the financial position of the *Consorzio* has improved. The shipments during the 12 months (July—June, 1909-10) have been 394,616 short tons, against 341,575 short tons in 1908-09, and the stocks at all shipping ports in Sicily at the end of June were 580,240 tons, against 586,825 tons in 1909.

The following are the current quotations: Best unmixed seconds, 83s.; best unmixed thirds, 81s. 3d.; current dark thirds, 75s. 6d. per ton of 1,050 kilos. gross shipping weight. Refined sulphur blocks, in bulk, 88s. 6d.; in bags of about 110 kilos., 91s. 6d.; bags of 55 kilos., 92s. 9d.; rolls, in 2-cwt. bags, 95s.; in 1-cwt. bags, 96s. 3d.; flowers, in 1-cwt. bags, "Excelsior," 112s.; "Commercial," 96s. 9d.; ground, in 1-cwt. bags, "best seconds," 90s. 3d.; "Commercial," 94s. 6d. per ton of 1,015 kilos., bags gross for net, barrels net weight, all f.o.b. Sicily.

TONKA BEANS.—Business has been done in *Angostura* description at 15s. per lb., and a further small parcel on the way is offered at this figure. *Black Para* are practically unobtainable.

Otto of Rose.

Our correspondent writes on August 12 that "the news this week from the *Bulgarian* market, though meagre and scanty, is favourable for the consumer. In spite of all the strenuous efforts on the part of the native speculators and others to artificially maintain the market, the tone continues weak, with downward tendency. Some of the exporters have already left for the West to urge personally the sale of their stock. Many consumers appear well supplied, and are disposed to withhold their additional purchases until after stocktaking. This accounts for the dull and stagnant condition of the *Bulgarian* market, where more than half of this year's rose output still remains unsold in the hands of the farmers."

Importation of Spirit.

The Customs method of dealing with foreign unsweetened unenumerated spirits imported in casks or metal drums and entered to be warehoused for exportation or methylation has recently been modified to admit of such vessels being cleared for home consumption if subsequently required. The new paragraph in the code of Revenue regulations will read:

When unsweetened unenumerated spirits in casks or metal drums are entered to be warehoused for "exportation only" or for "methylation only" the liquid quantity may be ascertained by gauging if the importer wishes it and the surveyor is satisfied; but the spirits may be subsequently delivered for home consumption if desired, provided that the liquid quantity be ascertained by weighing or measuring. Should packages which have been gauged on being entered for "exportation only" or "methylation only" be removed to another warehouse, the despatch is to be noted to the effect that the spirits must not be cleared for home consumption unless the quantity is ascertained by weighing or measuring.

Hankow Wood Oil.

The exports from Hankow during 1909 amounted to 550,118 cwt., valued at 471,728/-, against 701,873 cwt., valued at 648,516/-, in 1908. The United States took 136,832 cwt., and Europe 53,160 cwt. Only 7,850 cwt. was declared for London, and 1,800 cwt. for Liverpool. The British Consul at Hankow, in the course of a résumé on the wood-oil market furnished by local firms, states that in quality and colour the oil was excellent, and the higher cost of bean oil led to the absence of adulteration. The demand is increasing, as it is found useful not only in varnish and paint, but also in enamels and linoleum and oilcloths generally. The American bootmakers are said to be using it also for staining leather uppers, and the worst quality may go into soap and candles. Already over 9,000 tons of the new crop to be shipped after April (1910) have been contracted for, although the total export in 1909 was only some 9,500 tons. The loss by leakage was considerably less than in 1908.

Olive Oil.

Under date of August 16, a Liverpool firm of olive-oil brokers in their circular state that the market, after having remained stagnant for several months, has entirely changed during the last three weeks, owing to the unfavourable crop reports from all producing countries, which has resulted in a rapid advance of prices at shipping ports. The outlook for next year's supplies, therefore, is serious. In March last year they report that Gallipoli oil reached 80/- per tun f.o.b., and Spanish, Candia, and Levant 60/- to 62/- c. and c.i.f.; and if the statements made about the present crops are reasonably accurate, which they have no reason to doubt, it would appear that supplies available next year will be less than in 1909, as it was estimated that Spain carried over stock from the large crop of 1908 equivalent to about one-fourth of a crop. The shortage of edible fats now existing, and the very high prices ruling for all oils and fats, are also factors which must be taken into consideration. Soapmakers in the Levant and elsewhere, who usually confine themselves to olive oil and take very large quantities, are thus early giving attention to cotton oil, and several sales have already been made. This illustrates the actual shortage of olive oil that already exists, and it appears obvious that they will be compelled to take cotton oil in considerable quantities in the near future and throughout next year. Buyers will be well advised to watch carefully for adulterated oil, as the higher the price the greater the inducement to unscrupulous shippers and dealers to supply mixed oil, or "rectified."

Liberian Pepper.

According to the United States Chargé d'Affaires at Monrovia, the first kind of pepper discovered in Liberia was called "grains of paradise." From a kindred species these are sometimes called ca. damoms, but they are now better known as "malagueta." The leaves are long and of a light glossy green; the flowers grow close to the ground, stretching upward from hidden roots. The flowers are succeeded by flat, oblong fruits, which, when ripe, are about 5 in. long, and yellow, russet, or scarlet in colour. On account of the sweetness of its pulp, the fruit is a favourite food of the gorilla. With a shiny dark-brown colour on the outside, and a white kernel, the seed is not larger than hemp-seed. The "malagueta," on account of its spicy and aromatic qualities, was highly prized in Europe, and was the foundation of most of the spices and flavouring of drinks and viands, although, for some unknown reason, it does not now appear among Liberian exports. Largely used by the natives, this pepper grows in great abundance throughout the coast forests of Liberia.

St. Vincent Arrowroot.

The St. Vincent correspondent of the "West India Committee Circular" writes on July 25 that the chief event of the fortnight is the successful formation of an Arrowroot Growers' and Exporters' Association. The members of the Association include all the business firms dealing in arrowroot and leading growers. The objects of the Association are to promote

in every way possible the interests of the arrowroot industry, and to administer through a committee the fund to be known as the Arrowroot (New Market) Fund, which is to be collected by the Government through the imposition of an export tax of 6d. per barrel on all arrowroot exported, for the purpose of creating new markets for this product by means of advertisements. The tax will become payable on December 1 next. From December 1 also the members agree not to sell arrowroot below a certain fixed price per lb. gross. Should the committee of the Association consider at any time that the minimum price should be altered, they will so recommend a change to the Association. Action such as this on the part of arrowroot growers and exporters has long been desired, and it is hoped the Association will become a permanent one. The Administrator has taken the greatest interest in the matter, and it is largely through his untiring efforts that success has been attained. The committee of the Association consists of the Hon. Con. J. Simmons (Chairman), the Hon. D. A. McDonald, J. G. W. Hazell, and G. R. Corea. Each of these gentlemen represents big local interests in arrowroot. Mr. G. R. Corea has recently bought the large arrowroot estates of Sans Souci and Mount Greenan.

Ylang-ylang Cultivation in the Philippines.

E. de Kruijff, a Dutch technologist residing at Manila, communicates a note on this subject to "Teysmannia" (1910, 21, p. 167), in which he points out that Réunion is now competing seriously with the Philippines as a producer of fine ylang-ylang oil, and as a result prices have fallen seriously. The first quality oil is distilled entirely in Manila itself, and the second quality in the provinces. The distillers do not own plantations of trees, but merely buy ylang-ylang flowers through agents from owners of wild trees. A mature tree furnishes 60 kilos. of flowers per annum. In 1908 the flowers were worth 5d. to 10d. per kilo., but by the end of 1909 the price had fallen to about 2d. per kilo. In distilling ylang-ylang oil, two points seem to need special attention. The flowers must be arranged in the still in thin layers, and for the preparation of best quality oil a relatively small first fraction only must be taken. In deciding when to stop collecting for the best oil, the Filipino distiller relies on his sense of smell, but as a rule it may be said that from 350 kilos. of flowers 1 kilo. of the best-quality oil and then 0.75 kilo. of second-quality oil can be prepared. Great care must be taken to thoroughly clean the still between each pair of distillations, so that no trace of inferior oil gets into the second batch of first-quality oil. Curiously enough, however, the condensed water from the first distillation appears to be always returned to the still, though it has been in contact with second-quality oil. It may be noted that attention is being given to the production of ylang-ylang oil in Java and also in the Seychelles, but in the former island at least difficulty has been experienced in making a first-grade oil.

Camphor in Algeria.

The cultivation of camphor in France and Algeria is the subject of an article by M. J. Tabouriech, Professor at the Ecole Supérieure de Pharmacie at Montpellier, published in the "Bulletin de Pharmacie." The problem to solve was as to whether the camphor-trees in their new surroundings would be able to preserve their power of secretion, and whether the production of camphor would give an efficiency so as to allow of being commercially worked. At first the question appeared to be answered in the negative as the tests of the wood and leaves of camphor-trees cultivated in the jardin d'essai at Algiers and at other Algerian stations did not permit of the extraction of the least trace of camphor. Since 1895, however, Professor Trabut, director of the Botanical Service of the Government of Algeria, has maintained a contrary opinion. He declares that he extracted from leaves of young camphor-trees which he himself had sown a very appreciable quantity of camphor, the amount being exactly 38 grams from 6.6 lb. of leafed twigs. Notwithstanding this result the plantation was discontinued. A few months ago Professor Battandier, of the Ecole de Médecine et Pharmacie at Algiers, made an analysis of the leaves and sprigs of camphor-trees sown by Professor Trabut in 1892, and he easily extracted camphor from them in the proportion varying from 1.05 grams to 1.40 grams per cent. M. Tabouriech states that he himself has had occasion to examine leaves of the only camphor-tree at the Jardin des Plantes at Montpellier, which is fifteen years old, is very vigorous, and shoots forth long branches every year. The investigations made by the author were with fresh leaves from branches cut last March. The leaves were submitted to distillation, and yielded a proportion of camphor of 0.65 gram per 100 grams of fresh leaves. This is less than the results attained by MM. Trabut and Battandier, but this is not surprising, as the tree is cultivated in a conservatory, and has not plenty of air and light; and its power of secretion has consequently diminished. The author suggests that the public authorities should give further consideration to the promotion of camphor-cultivation, as the results render such attention worthy.



Memoranda for Correspondents.

All communications must be accompanied by the names and addresses of the writers, otherwise they are not recorded. Queries by subscribers on dispensing, legal, and miscellaneous subjects pertaining to pharmacy and its allied trades are replied to in these columns, if they are of general interest. Letters submitted to the Editor for publication (if suitable) should be written on one side of the paper only. Their publication in the "C. & D." does not imply our agreement with the opinions of the writers.

Chemist-extractors' Meeting.

SIR.—Since the publication of my letter in your last issue, my attention has been called to the fact that the Dental Congress is to be held at the Royal Horticultural Hall in London on September 6, 7, 8, and 9, and as no doubt a number of chemist-extractors will be visiting this Exhibition, it has been suggested that the date of the coming meeting should be altered to Thursday, September 8, at 7 P.M. I should be glad if you will call attention to the change of date, which I hope will be more convenient to those who intend being present. Yours truly,

Mansfield Road, Nottingham.

W. MEAKIN.

How Shakespeare's Daughter was Cured of Colic.

SIR.—The mantle of Elijah has fallen upon Elisha—"Xrayser II." is a worthy successor of "Xrayser I." The weekly page of "Observations and Reflections" remains, for many readers, one of the most attractive features of THE CHEMIST AND DRUGGIST. Like his predecessor, "Xrayser II." possesses the happy knack of combining shrewd comments on current topics with a pretty taste for antiquarian lore. Thus he will be found criticising the Curriculum in one paragraph and treating of Tyrian Purple in another, or discussing the Conference in one column and meditating on Medieval Medicine in the next! One of the most interesting of these old-world notes was "Xrayser's" recent quotation from Dr. John Hall's Case-book, in which the doctor describes the treatment of his wife when she was "miserably afflicted with colic." May I repeat the prescription with one or two modifications (italicised), and offer a possible solution?

Diaph.,						
Diacath.	...	...	...	aa.	3j.	
Pul. Holland.	...	...	...	3ij.		
Ol. rutaæ	...	...	...	3j.		
Lactis	...	...	...	q.s.		

F. glister ij.

Sed manente adhuc dolore et parum mitigato cui statim *injeci vimum pro glistero.*

Vini Hispanici lib. j. calidi.

Statim magnos edidit flatus et ab omni dolore liberata, stomacho applicabam emp. de labdano *cretano* cum caranna et sp. aro. ros. et ol. macis.

Translation.

Diaphœnicon electuary,						
Diacatholicon electuary	...	...	aa.	3j.		
Dr. Holland's compound senna powder	...	...	...	3ij.		
Oil of rue	...	...	...	3j.		
Milk	...	...	...	sufficient for 2 clysters		

But the pain still remaining and but little assuaged (by the first clyster), I at once injected a little wine instead of the (second) clyster, (namely) a pound of Spanish wine, warm. The patient immediately discharged much flatulence, and, being freed from all pain, I applied to the stomach a plaster composed of—

Gum labdanum (*cistus creticus*),
Gum caranga (*tacamahaca*),
Species aromaticum rosatum,
Oil of mace.

Diaphœnicon was an aperient confection containing dates, scammony, jalap, and ten other ingredients. *Diacatholicon* was another popular purge containing tamarinds, rhubarb, senna, and twelve other ingredients. *Holland's*

powder was a mild laxative containing senna, liquorice, fennel, and six other ingredients. *Aromatic rose species* was a carminative containing rose, cinnamon, cloves, and ten other ingredients! All these polypharmic compounds may be found in the second London *Pharmacopœia* or in Culpeper's translation of same, dated 1653.

Yours truly,

C. S. ASHTON.

The Proposed Curriculum.

SIR.—You have done a public service in getting the views of the teachers of pharmacy on the question of the proposed curriculum. It is obvious that these will be of great service in helping to form public opinion on the subject—all the more that the authors contradict one another on various points. The practical man, be he ploughman or teacher, can give points to the theorist any day, and the teacher is therefore much better qualified to advise on a course of study than any examiner, who has not been a teacher, ever can be. I am surprised to see diversity of opinion on such elementary subjects as the value of apprenticeship and the length of the curriculum. Mr. Grier wants a regular apprenticeship of three or four years, and Mr. Lucas wants this superseded by a collegiate training. Mr. Clayton says that a nine-months' course is long enough, and Mr. Lothian votes for three years! Mr. Muter thinks that things had better remain as they are unless the status of the chemist is improved, and Mr. Clayton thinks that if the examinations are made much more difficult no one will trouble to qualify at all. The feature in common in these letters, with one exception, is that not one of the men have the least notion of improving the present syllabus or going the least bit beyond it. The exception is Mr. Simpson, who has produced a most suggestive scheme, though unfortunately he means it to be grafted on to the 1868 examination, whereas it belongs to that of 1852. As you point out in your leading article, the recognition of the difference would go a long way to solve many difficulties, by providing a class of educated traders to meet the demands of the public and a class of professional pharmacists to serve those who require such service. Mr. Simpson's scheme is admirable, but not for men who want to pass the Minor examination.

Yours truly,

ANGLO-SCOT. (16/8.)

SIR.—Why ask the opinions of teachers of pharmacy? Many haven't sold a pill for twenty years. Their opinions would, however, be most valuable later on. Why not ask the poor chemists actually in business—

1. What technical knowledge have you been short of in business?
2. What technical knowledge have you found your qualified assistant defective in?
3. What is your idea of a curriculum?
4. How run it along with apprenticeship?
5. What subjects of your pharmacy-school days have aided you?
6. What has hindered you or been totally useless?

JAY MACK. (3/33.)

Chemists' Combines.

SIR.—I have read with some surprise the arguments put forward by "Anti-Combine" (C. & D., August 6, p. 245) against such associations as Camwal. I find the syphon trade a very vexatious one; nevertheless, I believe chemists ought to look nearer home to find the mischief. Camwal sell you a good article at a reasonable price, give a generous supply of free samples, and do a considerable amount of advertising to help chemists to build up a business for their commodity. The chemist then "cuts" the price until there is no profit left, and turns round and blames Camwal. It appears curious that chemists with a proprietary company like Camwal cannot fix a uniform profitable price for aerated waters, agree not to accept another person's syphons when brought to them by customers, and impress upon the public that the vase costs 2s. I have always believed the greatest enemies of the syphon trade are the careless housemaid and the marine-store dealer. The proprietor and retailer in Ucal are one and the same person, and I do not think it would be a terrible thing for chemists if Ucal became a household name—but why anticipate evils that do not exist? It

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appears just as reasonable to suppose that wholesale houses will open retail shops and deal with the public direct.

Yours truly,
COMBINE. (254/52.)

SIR,—Regarding my letter on "Chemists' Combines," in neither Mr. Glass's nor Mr. Cadge's replies do I find anything which disposes of my objection. Mr. Cadge says there is no inducement to take up blocks of Ucal shares at 5 per cent., but, on the other hand, there seems to be nothing to prevent it, or even limit any shareholder's holding of shares. The bonus to members is at the mercy of the majority at a shareholders' meeting. Camwal members have found in my district that the trouble is very practical, and they still hold their original shares.

If Mr. Cadge is expecting that the public is going to leave the "Co-op." on account of Ucal Emulsion or any other line of Ucal he is mistaken. Before Ucal could be of the least service in that way it would have to create an advertising department equal to that of Scott's, Beecham's, and Pears' rolled into one. Then, and then only, could it influence the "Co-op." member or "store" customer. Ucal being at present mainly initiative in its lines, has to fight the same battle that the ordinary chemist has with his lines—i.e., that of selling his own for the advertised line. In my own business I meet very severe competition, but have found the personal factor the only successful weapon. I do not agree that through not having Ucal thousands of customers are thrown into the arms of the nostrum advertisers. I think the nostrum advertisers throw the customers into our shops, where we deal with them according to the way the advertisers deal with us—at least, I do. If the article is P.A.T.A. and bears a reasonable profit, I do not interfere with the sale of it at all; but if otherwise I do my level best to influence the customer in other directions. I do not believe in substitution; but any firm which does not protect the retailer against the cutting of prices is not entitled to much consideration from retailers. If I were a member of Ucal I ought to push Ucal even if the advertising firm is loyal to the trade or not, which is not fair trading to me. I realise that we have no control over advertised lines, and consequently run as many lines as I can of my own; but not for substitution purposes. They sell because I make them, one way or another, and the business thus created is peculiarly my own.

The man who moves about from town to town is, in my estimation, a negligible factor; hence I think Mr. Cadge's argument against individual lines for chemists is not very strong. I do not agree that my argument against combines applies to P.A.T.A., B.P.C., or Pharmaceutical Society, because we create no business goodwill by joining them, and can cease having any dealings with them without disturbing our business routine one atom. Mr. Glass says the Camwal case is not *à propos*. It seems to me that to run such a business as Camwal is easy (as it proved to be so long as it continued on its original lines), as compared with the complex business of establishing a wholesale chemist's and druggist's business, combining a speciality business with its various lines to make, put up, and advertise. Another objection to the Ucal idea is that when a man adopts Ucal lines and pushes them he creates nothing for himself in the way of goodwill—he has merely become a distributor of Ucal, Ltd. A new chemist opening opposite him can get and sell the Ucal lines and divide the Ucal business with the established chemist who created the sales in the first place. It is easier to get the business in established lines from a competitor than to influence a competitor's trade in his own proprietaries. I always let people understand that there is not a single proprietary article made that the chemist cannot make himself, so as to counteract the idea that advertised lines embody some discovery which no ordinary chemist can possibly understand. I am as desirous as anyone of promoting the welfare of the chemist, but it will not be done by taking from him the last bit of manufacturing and compounding that (in many cases) he has to do. He will simply be lowered still further in the public estimation.

Yours faithfully,
ANTI-COMBINE. (4/25.)

Chemists' Hours.

SIR,—I feel certain many of us envy the fair treatment "Country Chemist" accords his assistant (*C. & D.*, August 6, p. 243). It is good to hear an employer say that it pays to study a good assistant, quite apart from other considerations, but I think it better to have him for a boss. Many employers consider it beneath their dignity to present any sort of confidence to an assistant; they prefer somehow to conduct an everlasting espionage, as though the assistant were a thief on probation. Usually the conservative (one groove) men are the worst offenders in these respects. They conduct their business to-day in the same style they did years ago, with no attempt at adaptation to modern methods. Luckily these do not form the majority. I envy those whose employers are fair and just like "Country Chemist," and condole with those who, like myself, find my "time off" systematically encroached upon with a chimerical promise of time to be made up. This is written in no pessimistic mood. I have had good and bad employers in my hunt around for experience. For an employer who is also a gentleman I shall work as well as I know how to, and my interest in his business will be genuine and whole-hearted.

Yours faithfully,
T. M. (15/8.)

N.U.A.P.

SIR,—I have great pleasure in supporting the views put forward by Mr. F. Bullen (*C. & D.*, August 6, p. 243). Pharmacy is suffering from lack of organisation. The careful student of pharmaceutical affairs will notice that time after time chemists have failed to attain their object through lack of cohesion. If the N.U.A.P. is to succeed in the work of organisation, there must be a travelling organiser. My experience has been that one week of canvassing will produce better results than a year of letter-writing. The assistants and managers need their whole strength in order to get satisfactory results from the promised Shop Hours Bill, and it behoves the enthusiast to take a bold step and see that a N.U.A.P. canvasser is sent out to bring in the waverers and those who have not yet heard of the Union.

JOSEPH M. DOWTY.

Cheltenham.

Early Use of Cocaine.

SIR,—I was greatly interested in your quotation from the *C. & D.* of 1860, *re* cocaine, as I believe I was the first English dentist to perform operations under its influence; if I am not entitled to this distinction I shall be glad to be corrected. In December 1883, when I had already practised as a dentist on my own account for upwards of twelve months, I was invited by the late Drs. Bronner and Bell to accept the post of dispenser to the Bradford Royal Eye and Ear Hospital. At this time Dr. Bronner's two sons were studying for the medical profession—one in Heidelberg and the other in Strasburg; and in April 1884 they both visited the hospital and gave a glowing description of the success of the use of hydrochlorate of cocaine as a local anaesthetic in some of the German hospitals. I was told to order some of the salt, and procured one scruple, which cost 2s. 8d. per grain. Used in many minor delicate operations on the eye in the institution, it at once sprang to favour, and one day shortly after its introduction Dr. Edward Bronner said to me, "It seems to me that this cocaine might also come in useful for the extraction of teeth. I have a patient from whom it is necessary to extract three. Get the upper bicuspids and come and extract them. I will inject the cocaine." I performed the operation to the intense satisfaction of Dr. Bronner, myself, and the patient, since which I have administered it thousands of times, and never with any untoward result. At the time of which I am writing cocaine had not come into general use as an anaesthetic—in fact, Mr. Arthur Underwood, M.R.C.S., L.D.S., in his "Notes on Anaesthetics" (1885), does not mention it at all. By the way, Martindale, in his "Coca, Cocaine, and its Salts" (*vide* p. 52), says: "Niemann gave it the formula of $C_{22}H_{22}NO_8$ (old notation), but Lossen in 1862 assigned it the now accepted formula of $C_{17}H_{21}NO_4$." I should say the former is the more strictly correct.

Bradford.

CHAS. F. FORSHAW.

Chemists and Soda-water Manufacture.

SIR.—The recent correspondence on this subject has been entertaining and interesting. There have been emphatic letters from interested persons who have appliances and machinery to sell, who make out this side-line to be a veritable gold mine for the chemist. On the opposite side men who have had actual experience record their views in letters briefly, but to the issue—i.e., the unprofitable nature of the business. "Liq. Soda Eff." seems to belong to the former class. He tells us that the chemist who once embarks in the business will lose a lot of clients if he drops it. I do not agree. I doubt if the chemist will lose a solitary customer, but I have no doubt whatever that he will lose the bulk of the capital he has invested in machinery and syphons. The argument that the chemist may obtain enhanced prices for his manufactures is only partly true. Owing to the advent of direct supplies and drug companies in all large towns nowadays syphons can be purchased for 2s. 6d. per dozen, delivered direct to the door of the consumer, and this will probably be the ruling price of the future. The British public will not pay more to the chemist for soda-water than for other goods. Established manufacturers of reputation and name will always obtain their prices, but the manufacturing chemist is obliged to meet competition if he desires to do any business at all. The correspondence has served a good purpose in proving the unprofitable nature of the business and that it is one that had better be left alone.

Yours truly,

PHENACETIN. (254/62.)

Tr. *Rhei Amara*.

SIR.—You published some time ago some information I supplied as to the formulae of the various ingredients in mist. Thielmanni, inquiry having been made as to this, which inquiry followed the publication of the formulae for mist. Thielmanni and also for "Conradi's" (C. & D., August 24, 1907, p. 357, and March 7, 1908, p. 384). I have since had an inquiry as to the formulae for *tinct. rhei amara*, one of the constituents of the "Conradi's" mixture, and as I recently had some difficulty in getting the "Conradi's" mixture for my own use, because of this *tinct. rhei amara* not either being known or in stock, I have obtained from a Norwegian Apoteker the formula as under, which I think may be of interest to your readers :

Tinct. Rhei Amara.

Fruct. cardamomi	...	...	1 part
Rad. gentianæ	...	...	4 parts
Rhizom. rhei	...	...	10 parts
Spir. dilut.	...	...	100 parts

All by weight.

Yours faithfully,

WM. BOUSFIELD.

Sutton Coldfield.

Moor-ill, Dry Murrain or Red Water.

SIR.—As the season for this malady is now on, the following may be of interest to some of your readers. Some authorities have stated, and still hold, that this disease is conveyed or encouraged by the tick—"tick fever," they call it—but I have never observed any fever unless when some lung trouble was present, or a rise of temperature (followed by a fall later) indicated inflammation due to immovable impaction of the "monyplies" or third stomach. I have seen red water occur in housed stock which had absolutely no ticks on them, and I have seen handfuls of ticks on cattle which had no red water. I have actually taken ticks from beasts suffering from red water and put them on healthy animals to see if the disease would be conveyed, but it wasn't. A lot of cattlemen believe firmly that the disease is due to grazing on some kind of poisonous plant, they know not what. In my opinion the disease, which nearly always starts with a severe scouring fit, is due in every case to weak digestive and assimilative systems, combined with inability to get rid of excess of urea in the blood, and resulting finally in impaction of the "monyplies," the root of the evil being grazing on rank indigestible pasture of fifty or a hundred years old, which consists of practically nothing but weeds. I have also seen it follow on feeding on cheap rubbish of cotton-cake and bean-meal. Any food at all capable of upsetting the digestive system and

generating excess of urea in the blood is likely to cause the disease. The red wafer is only a symptom of the disease, the colouring matter being the red corpuscles of the blood, which are broken up and thrown out into the urine. Some authorities think that getting the water cleared is the first step to success, but that is where they court disaster. The whole danger lies in the impaction of the third stomach; therefore that organ must be thoroughly purged at the outset if we expect to save the animal. Giving strong diuretic medicine with a view to clearing the urine is simply killing the beast. The all-important point here is the treatment which is most likely to baffle this awful malady when it comes along. I have proved the following thoroughly efficacious in over 80 per cent. of the cases I have handled in the course of my experience :

Calomel.	...	...	...	...	3ss.
Aloes barb.	...	...	...	...	3iss.
Pot. bicarb.	...	...	...	...	3ij.
Pulv. zingib.	...	...	...	...	3j.
Mag. sulph.	...	...	...	...	lb.j.

M.

This is no doubt a bold-looking dose, but it is perfectly suitable for cattle of the large breeds over three years old; weakly old cows and cattle from one to three years, two-thirds above dose; six to twelve months, small half. Put in half a gallon of tepid water with from half a pint to a pint of salt, stir and add one or two pounds of treacle, stir again and drench slowly. Rinse the mouth with some water. Now place a pail of water, with the chill off, in front of the beast, and allow to drink freely, renewing as often as required. Every three hours give two raw eggs whipped up in a quart of sweet milk. The drink usually acts as a purgative in from twelve to fourteen hours. Should the bowels not respond in this time, give spt. am. co. 3ss. to 3j., tr. nuc. vom. 3ij. to 3iv., and ol. tereb. ver. 3ss. to 3j. in gruel every four hours. After purging sets in, offer a little good sweet hay; and if the beast is very weak continue the eggs and milk and stimulants for a day or two till appetite is keen, strength is restored, and rumination commenced.—Yours, etc.,

E. W. DODDS.

Subscribers' Symposium.

(Information Solicited or Supplied.)

C. & D. Appreciated.

Mr. F. E. Rookledge (Easingwold, Yorkshire), who has just retired from business, writes: "I will take this opportunity of thanking you for the usefulness and virility of your journal, which I found to my benefit during the thirty years I have been in business. May you live on and prosper."

Killing Worms in Lawns.

In your reply to a correspondent in the C. & D., May 21, p. 301, you refer to the strength of the solution of mercuric chloride for killing worms in lawns. As I have had a great deal of experience in killing worms on bowling-greens, my method may be useful for others. I take 3 oz. of corrosive sublimate in powder and dissolve this in about 3 gals. of hot water, and, while hot, mix this with about 37 gals. of cold water in a 40-gal. cask standing handy on the green. It is necessary to choose the time to apply the solution. Unless the ground is fairly wet from recent rain, the worms will be too deep in the soil, therefore the best time for poisoning them is after heavy rain. I then take a watering-can without rose, and by swinging it from right to left, pendulum fashion, I cover the surface about 6 ft. wide. The 40 gals. put on this way will just cover a 6-ft. strip of a 110-ft. long green. While watering one strip, the water is boiling for the next strip. The strength above mentioned kills the worms in thousands, big and little, and never affects the tenderest grass. Although we have blackbirds and thrushes all around the green, I have never seen a dead bird as a result of eating the poisoned worms. The above may be useful to some chemists who, like myself, are ardent bowlers.—N.Z. Bowler (South Canterbury).

"Mr. Polly" and Another.

I have seldom read such an excellent critique of a book as that contributed by "Xrayser II." in your issue of July 23. Most criticisms are naturally somewhat incomplete; the public does not care to receive all its literary fare in tablet form. But I for one do not now require to peruse Mr. Wells's latest book; I know Mr. Polly as well as if I had lived next door

to him for twenty years. And, if the truth be told, I have experienced, and probably shall always undergo, the tantalising hopes and fears, the despair and the brief bright occasional gleam of hope that flickers far away on the horizon of life, and lures one into the belief that some day the clouds will entirely disappear. If we only could remember always how drab and dreary life would become without its endless succession of annoyances and disappointments! The wail of the modern youth is that he has no freedom—that he is bound mercilessly by the dictates of civilisation; and because some of the younger members of the craft may know not how to enjoy really the temporary cessation from labour which the holiday season brings, I venture to recall the manner in which I found the silver lining. Several years ago a friend and I idly wandered around a large railway station in the North. It was a Saturday evening, and both of us were off duty for a fortnight, and, what was more wonderful, we possessed several sovereigns more than we had ever owned before. "See this fellow with the huge pile of luggage!" I said, indicating a gentleman waiting alongside the train for the South, who was almost completely surrounded by packages of all sizes. "Suppose we take this train?" suggested my comrade, thoughtfully. In five minutes we were seated in a compartment, accompanied only by our walking-sticks. I shall never forget that holiday! When we left the train several hours later we walked at dawn through the streets of —, and our tramping excursion only ceased the day before our vacation was ended. We put up at quaint wayside inns; we had no set programme, merely drifting along contentedly and happy, and we enjoyed our impromptu trip thoroughly. Just a note regarding one memorable incident. We arrived at the — Arms late one afternoon. After tea we went out for a look round the village, and on our return a concert was in progress in our temporary quarters. The landlord's daughter—methinks I see her now!—acted as accompanist, striving to revive the old-time splendour of the ancient piano, and the talent of the countryside paraded in full strength. I have always imagined I could sing; my comrade is a strenuous conversationalist still. Long, long after closing time the last reveller departed, and in the quiet summer night we could hear the echo of his swan-song:

"Dashed through the Rooshian valley
With his famous Light Brigade."

"How much is our bill?" I asked the landlord next morning. "Nowt!" was the brief response. "Beg pardon," I murmured, uncomprehendingly. "Well, we 'ad a mighty pleasant time last night," the innkeeper said; "an' I think you chaps 'ad too." And not a farthing would he accept from either of us. Peace be with him and with all his household!—*Hamish Dhu.*

Legal Queries.

Consult the legal information in "The Chemists' and Druggists' Diary," 1910, before writing about your difficulty.

Saxin (257/66) puts the following case: A, in the presence of B, lends C 2*l.* and gets an I.O.U. for it. Unfortunately A loses the I.O.U. Can A claim through the county court for the 2*l.* on giving proof through witness B? [A is entitled to sue C for the 2*l.* money lent. He should call B to prove that the money was lent.]

Sigma (256/21) asks the following: A lets a shop on a lease to B. The lease expires, and a new one is drawn up on agreed terms. When B is asked to sign the lease he objects to one of the clauses which A has inserted for his own protection, and refuses to sign. A does not intend to withdraw the clause, and three months have expired. What is A's position as regards ejecting B if he continues to refuse to sign? [It seems that B's lease has already expired, and he is still in occupation of the premises. We do not understand how the new lease could have been drawn up on agreed terms if a clause has been inserted to which he objects. His position is that of a yearly tenant on the terms of the old lease, and A must give B six months' notice, expiring at the end of the year.]

Miscellaneous Inquiries.

As we do not in this section repeat information given during the past twelve months, inquirers should refer to the copies mentioned. Back numbers for the past five years can generally be obtained from our office at the published prices.

Cow Cure (244/54).—**MILK-FEVER TREATMENT.**—It is now the recognised, and certainly the most successful, treatment of parturient apoplexy (milk-fever) to inject a solution of potassium iodide or chinosol, or both combined, into the cow's

udder through the teats. All (if any) milk must be removed before injecting. Inflation with sterilised air or oxygen is also practised, and this is also as satisfactory as the treatment referred to above. In inflammation of the womb (metritis) no good would result from this treatment. In mammitis or garget relief might be given, but injections of solution of atropine or ext. belladon. would be more useful, as this would not only soothe and relieve the pain, but would also diminish the formation and secretion of the milk. "V.C.P." describes in full the treatment referred to.

L. A. W. (249/59) writes: "I have a pony which I turned out to grass five weeks ago. Three weeks ago she did a short day's work, and was turned into the field at 4 P.M. In the morning she dragged her near foot. She did about a mile or two, and was again turned out. Next morning she was dead-lame, apparently on both legs, dragging them painfully. I consulted a veterinary surgeon, who said the pony had a chill, and suitable treatment was administered. The pony seems to have got over the fever, but continues very lame, refuses dry food and has become very thin, and seems all wrong. The animal flinches badly when touched over the hip-joint, and the legs are swelled badly. Can you tell me what is likely to be the matter?" [This is undoubtedly a case of systemic "chest" founder, caused by a chill or drenching after a heat. Give a smart dose of physic, put the animal into a well-ventilated loose-box, put a rug on the body, and bandage the legs with flannel; also bathe the legs daily with tepid water with a mild astringent added, such as plumbi acet., vinegar, tr. myrrh, etc. Have the shoes removed and put on again to suit and assist the gait and position the animal stands in, also give pot. iod. and ferr. sulph. or carb. If the spine or nervous system seems to be affected, give pot. iod. and ergot. Should an effusion be present in the chest, which is doubtless causing the swelling of the legs, a seton inserted into the chest will greatly assist its removal. The diet must be light and of a laxative nature. A few carrots daily can also be given. Great patience must be shown in the treatment of this disease, as it is usually a long time before satisfactory results are obtained.]

E. B. (250/47).—**OLEUM HYPERICI**, or red oil, is a domestic remedy for bruises. It is prepared by digesting 4 oz. of the tops of *Hypericum perforatum* (St. John's wort) in a pint of olive oil. As a remedy the herb was formerly in great repute.

O. & O. (252/58).—**ONE-SOLUTION DEVELOPER.**—A good formula was given in the *C. & D.*, August 21, 1909, p. 349. Here is another:

Metol	...	...	...	...	75 gr.
Sodium sulphite	...	...	...	...	1 <i>1</i> / ₂ oz.
Sodium carbonate (crystal)	...	...	...	...	1 <i>1</i> / ₂ oz.
Potassium bromide	...	...	...	...	8 gr.
Water	...	...	...	...	10 oz.

For portraits, dilute with an equal part of water; for landscapes, with twice the quantity of water.

F. C. C. (254/50).—(1) **SYRUP OF BUCKTHORN** is prepared as follows:

Buckthorn-juice	...	...	...	4 pints
Ginger, sliced,				
Pimento, bruised, of each			...	3/4 oz.
Refined sugar	...	...	...	5 lb.
Rectified spirit	...	...	...	6 oz.

Evaporate the juice to 2*1*/₂ pints, add the ginger and pimento, digest at a gentle heat for four hours, and strain. When cold add the spirit, let the mixture stand for two days, then decant off the clear liquor, and in this dissolve the sugar with a gentle heat, so as to make the sp. gr. 1.32.

(2) A list of synonyms is given in this year's *Diary*.

Retrospect of Fifty Years Ago.

Reprints from "The Chemist and Druggist," August 15, 1860.

Educational.

The Senate of the University of London have just made a regulation to the effect that at the Second Examination for M.B., "the candidate who shall distinguish himself the most in Midwifery shall receive an Exhibition of 30*l.* a year for the next two years, with the style of 'University Scholar in Midwifery'." This is important as regards the encouragement it gives to the study of this subject. Up to the present time Scholarships have been given in Medicine and Surgery, but nothing in Midwifery. It is only due to Dr. Graily Hewitt to state that he was the first to propose that the Senate should award prizes to those gentlemen who had distinguished themselves in the art and science of Midwifery.

Trade-marks Applied For.

Objections to the registration of any of the undermentioned applications must be stated on Form T.M. No. 7 (obtainable at Money-Order Offices for £1) and lodged with Mr. Temple Franks, Comptroller-General, Patents Office, 25 Southampton Buildings, Chancery Lane, London, W.C., within one month of the dates mentioned.

The figures in parentheses refer to the classes in which the marks are desired.

(From the "Trade-marks Journal," July 20, 1910.)

"WOMA"; for medicated cigarettes and fumigating-paper (3). By M. H. Workman, 17 Strathyre Avenue, Norbury, London, S.W. 324,504.

Facsimile signature "CYRIL GARDNER" in a diamond; for all goods (3). By C. Gardner, 292 Holloway Road, London, N. 324,566.

"LEVUROIDS"; for a medicated preparation (3). By Levuroids Manufacturing Co., 18 Queen Victoria Street, London, E.C. 324,649.

"VYLDY"; for a corn cure (3). By F. W. Wilde, 12 Cheniston Gardens, London, W. 324,802.

Picture of Britannia, holding pince-nez; for goods (8). By F. W. Bateman, 55 Berners Street, London, W. 321,542.

"Fozroz"; for a tartaric-acid substitute (42). By Weaver Refining Co., Ltd., Acton Bridge, Cheshire. 321,878.

Devices with "PERIN," for all goods (42); and "PERBORIN," for all goods (48). By Prescott & Co., 63 Corporation Street, Manchester. 324,077, 324,005.

"KIM"; for alcoholic essences (43). By Bratby & Hinchliffe, Ltd., Sandford Street, Great Ancoats, Manchester. 324,782.

"YAMA"; for toilet preparations (48). By S. F. Goss, Ltd., 460 Oxford Street, London, W. 322,446.

"RALIANA"; for perfumery, etc. (48). By J. & E. Atkinson, Ltd., 24 Old Bond Street, London, W. 323,582.

"GRESOPHAS"; for all goods (48). By Osborne, Garrett & Co., 51-54 Frith Street, Soho, London, W. 324,607.

"UNOIT"; for leather articles (37), for a foot-powder (48), and for brushes (50). By S. B. Cross, Ltd., 183 Price Street, Birkenhead. 321,922, 321,924, 321,925.

Key device; for bottle caps or capsules (50). By H. W. K. Pears, 2 Hove Park Villas, Hove, Sussex. 323,754.

(From the "Trade-marks Journal," July 27, 1910.)

"PYRAMID BRAND," and picture of same; for sulphuric acid and sulphide of iron (1). By J. Nicholson & Sons, Ltd., Church Street, Hunslet, Leeds. 323,633.

"RHODOL"; for a photographic chemical (1). By Société Chimique des Usines du Rhône, 6 Rue Pigalle, Paris. 323,709.

"SWASTIKA," and Greek key pattern device; for chemicals (2), laundry goods (47), and perfumery, etc. (48). By W. Gossage & Sons, Ltd., Widnes, Lancs. 324,839, 324,841/2.

"SPERMOZYNE," and label device; for a veterinary chemical preparation (2). By Scientific Veterinary Supply Association, Ltd., Carlton House, Lower Regent Street, London, W. 322,236.

"PARTUREX"; for chemicals (2). By Day & Knight, 86 Week Street, Maidstone. 322,454.

"TISANE CONCENTRÉE D'HERBES AMÉRICAINES DES SHAKERS," and label device; for a medicinal preparation (3). By A. J. White, Ltd., 35 Farringdon Road, London, E.C. 299,566.

"PINEOLEUM," and pine branch device; for medicinal chemicals (3). By Pinoleum Co., 27 Thames Street, New York. 320,964.

"PERDYNAMIN"; for medicinal chemicals (3). By A. Jaffe, Alexanderstrasse 22, Berlin. 323,306.

"LYMPHO DESARROLLANTE," and label device; for a chemical rupture cure (3). By W. S. Rice (R.S.), Ltd., 8-9 Stonecutter Street, London, E.C. 323,159.

"OZUM"; for an eczema cure and medicinal soap (3). By Taylors, Northern, Ltd., 9 Arcade, Halifax. 323,369.

"VINVIVA"; for medicated wines (3). By J. Sutherland & Co., 88 Dalry Road, Edinburgh. 324,241.

"PARDENT"; for dental chemicals (3). By Clay & Abraham, 87 Bold Street, Liverpool. 324,700.

"ZATIO PASTILS"; for medicated pastilles (3). By G. Ratcliffe, 23 Dewsbury Road, Leeds. 325,064.

"CUTILOID"; for all goods (4). By Gum Tragasol Supply Co., Ltd., The Works, Hooton, Cheshire. 324,645.

Facsimile signature, "J. & H. LIEBERG"; for surgical syringes and injectors (11). By J. & H. Lieberg, Mosenthalstrasse 4, Kassel. 325,026.

"KITCHEN BOUQUET"; for flavouring and colouring extracts (42). By Palisade Manufacturing Co., 247-249 Clinton Avenue, West Hoboken, N.J., U.S.A. 323,384.

Device of two superimposed triangles; for beverages and cordials (42), and for mineral and aerated waters (44). By Jewsbury & Brown, Ardwick Green North, Manchester. 324,114, 324,072.

"A VARIN"; for a non-medicated constipation food (42). By Callard, Stewart & Watt, Ltd., 49 Old Bond Street, London, W. 324,137.

"HYFLI"; for mineral and aerated waters (44). By Clayton & Jowett, Ltd., 5 Concert Street, Liverpool. 323,514.

"PRESSINE"; for lubricants (47). By E. Cook & Co., Ltd., Bow, London, E. 323,671.

"UCAL"; for all goods (48). By United Chemists' Association, Ltd., Vulcan Chambers, St. James Street, Sheffield. 322,608.

"NAZENE"; for toilet-preparations (48). By I. Clifford, 20 Grosvenor Street, London, W. 323,592.

"EIDERDOWN"; for toilet soap and powder (48). By Southall Bros. & Barclay, Ltd., 19-21 Lower Priory, Birmingham. 323,848.

"FERN TOILET SOAP," and label device; for perfumed soap (48). By C. C. Goodwin, Ordsall Lane Soap Works, Manchester. 324,225.

"GLEEMO" and "THETO"; for all goods (48). By Thos. Christy & Co., 4-12 Old Swan Lane, London, E.C. 324,280/1.

(From the "Trade-marks Journal," August 3, 1910.)

"CHELMA"; for dry plates and films (1). By W. Cormack, 23 Dormer Place, Leamington. 324,044.

"MARCA PERÚ," and picture of peacock; for saltpetre (1). By A. P. Da Silva & Co., 62 Rua Duque de Caxias, Pernambuco. 322,630.

"NEOCITHIN"; for chemicals (2). By Neocithin Manufacturing Co., Ltd., 106 Gitschnerstrasse, Berlin. 318,902.

"DIAMOND ANTISEPTICS," and label device; for an antiseptic (2). By Eli Lilly & Co., 210-214 East McCarty Street, Indianapolis, U.S.A. 320,304.

"LA TOJA," and label device; for medicated soap and medicinal preparations (3). By Sociedad Anonima "La Toja," 5 Calle de Alfonso 13, Pontevedra, Spain. 321,097.

"BRADY'S DAERMO"; for aperient tablets (3). By J. Brady, Gumpendorferstrasse 105, Vienna, VI. 322,822.

"PASGUM" and "MULBERRY-LEAF CORN SILK"; for corn cures (3). By J. Sim, 15 Manor Road, Hoylake. 323,292/3.

"VIN VITE"; for cough mixtures (3). By J. R. Hankey, 10 Colne Road, Brierfield, near Burnley. 324,094.

"SOLAVO"; for a skin ointment (3). By J. S. Reed, 9 Westwell Street, Plymouth. 324,267.

Dr. Locock in triangular device; for pulmonic wafers (3). Da Silva & Co., 2 South King Street, Manchester. 324,380.

"AETHOSAN"; for local anaesthetics (3). By H. L. Waugh, 51 New Briggate, Leeds. 324,788.

"GUYKOSE"; for pharmaceutical products (3). By The Bayer Co., Ltd., 20 Booth Street, Manchester. 324,916.

"HEGONON"; for medicinal chemicals (3). By E. Schering, 170-171 Mullerstrasse, Berlin. 325,044.

"CITROD"; for medicinal chemicals (3). "KRONINE"; for mineral and aerated waters (44). Device of two superimposed triangles; for toilet articles (48). By Jewsbury & Brown, Ardwick Green North, Manchester. 325,115, 325,118. 324,073.

"PRISMA"; for non-medicated surgical goods (11). By M. Steinberg, Dürerstrasse 59, Cöln-Lindenthal. 313,395.

"LACTOIDS"; for butter-milk tablets (42). By Anglo-American Pharmaceutical Co., Ltd., 59 Dingwall Road, Croydon, Surrey. 323,034.

"STUART MONOPOLE WINTER OIL"; for edible soya-bean oil (42). By British Oil and Cake Mills, Ltd., Cleveland Street, Hull. 324,500.

"REGAL"; for pepper (42). By Hugh Moore & Alexanders, Ltd., Yarnhall Street, Dublin. 324,713.

"CRICK"; for all goods (44). By Max Hilbert, 10 Paulstrasse, Hamburg. 323,955.

"LONDON'S PRIDE"; for perfumery, &c. (48). By W. G. Smith, Thames Street, Hampton. 323,563.

"CHAPICIDE"; for a toilet preparation (48). By E. W. Sleath & Co., Teneriffe Street, Manchester. 324,207.

"TUCALIA"; for all goods (48). By United Chemists' Association, Ltd., Vulcan Chambers, St. James Street, Sheffield.

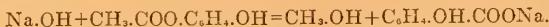
Corner for Students.

Summer Studies.

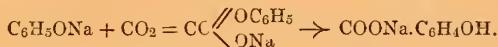
Pharmacopæcial Notes.

OLEIC ACID.—Under this heading last week the formula for olein was given as $(C_{17}H_{32}COO)_n$, instead of $(C_{17}H_{32}COO)_nC_2H_5$.

SALICYLIC ACID ($C_6H_5OH.CO_2H$).—The natural acid is obtained by saponifying either oil of wintergreen (from *Gaultheria procumbens*) or oil of sweet birch (*Betula lenta*) by heating with sodium or potassium hydroxide solution under a reflux condenser. Both oils are practically pure methyl salicylate—

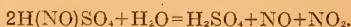


The methyl alcohol, which is very pure, is distilled off, and a mineral acid added to the residue to liberate the salicylic acid. Artificial salicylic acid is made in large quantities from sodium phenate (see Carbolic Acid). On saturation with carbon dioxide gas under pressure, sodium phenate is changed into sodium phenyl carbonate, which, on heating to $130^\circ C.$, undergoes molecular rearrangement, giving sodium salicylate, from which salicylic acid is obtained as above—



The acid is liable to be contaminated with creosotic acids (from cresols, homologues or methyl phenols of carbolic acid, present in the crude phenol), which are regarded as toxic. The "physiologically" pure salicylic acid can be prepared by mixing solutions of lead acetate and sodium salicylate in alcohol, and then fractionally crystallising, the first few crops of crystals consisting of pure lead salicylate. The lead can be precipitated as sulphate by adding sulphuric acid, and the salicylic acid extracted by means of alcohol, from which it crystallises after filtration and evaporation. The B.P. test for the presence of phenol depends upon the fact that salicylic acid decomposes and phenol has no action upon sodium carbonate, the sodium salicylate formed being readily soluble in water and the unchanged phenol in ether. Phenol was frequently present in salicylic acid in appreciable amounts in former days, owing to its regeneration from sodium phenyl carbonate unless the latter is heated under pressure.

SULPHURIC ACID should contain 98 per cent. of hydrogen sulphate (H_2SO_4). This important compound, which forms the basis of chemical industry, is dealt with at length in the usual text-books which the student should consult. It may be mentioned here that iron pyrites or Sicilian and recovered sulphur are the starting-point in the preparation of the acid, both on combustion yielding sulphur dioxide. The sulphur dioxide may be oxidised in the presence of steam in leaden chambers, using nitrogen peroxide as oxygen carrier or catalyst. The series of reactions is complicated, but nitrosyl-sulphuric acid ($H_2NO.SO_3$), or "chamber crystals," which forms when the supply of water vapour is insufficient, is believed to be an intermediate product. Nitrosyl-sulphuric acid decomposes in contact with steam as follows :



The nitric oxide takes up atmospheric oxygen and becomes the peroxide, which again enters the cycle of reactions. The oxides of nitrogen are derived in the first instance from sodium nitrate, and theoretically should not need renewal, but practically small additional amounts are required to make up loss by leakage. The chamber acid is concentrated first in leaden pans and finally in platinum boilers. Arsenic is got rid of as the volatile chloride by distilling with hydrochloric acid (see notes on arsenious acid), and it is freed from nitric and nitrous acids by distilling from glass retorts with a little ammonium sulphate. On the Continent the "contact process," which yields a very pure product, is gaining largely, sulphur dioxide and atmospheric oxygen combining to form sulphur trioxide when passed over platinised asbestos (platinum in a finely divided condition). The success of this process is dependent upon freedom of the gases from dust (and also volatile arsenical compounds) and strict regulation of temperature. The solid trioxide is a convenient form for transport if access of moisture is prevented. To make sulphuric acid the trioxide is dissolved in water to any strength desired. Nordhausen sulphuric acid (H_2SO_4) is made by distilling dried ferrous sulphate or by adding water to sulphur trioxide. The impurities to look for in sulphuric acid are arsenic and nitric acids, and few samples of the commercial acid will withstand the brucine test for the latter.

The South Australian Examination.

HAVING found the Minor experiences published in the *C. & D.* both interesting and instructive, I forward a sample of what the South Australian student has to know in order to qualify.

In the first place, the examination is divided into three sections, the first of which must be passed before attempting the second, and the second before the third. The first, or the "Preliminary" section, consists mainly of arithmetic, algebra, metric weights and measures, English grammar and composition, and fairly stiff Latin, which in my case was chiefly culled from "Caesar." The second, or "Intermediate" section, consists of botany, organic chemistry, inorganic chemistry, and practical chemistry, 60 per cent. being required in order to pass. I may mention that lectures are arranged for pharmacy students at the Adelaide University. Having been successful in the "Intermediate," we attended lectures in *materia medica* and *pharmacy*. The "Final" examination was as follows :

DISPENSING AND PRESCRIPTIONS.—

Codein.	...	...	...	...	...	...	...	gr. iiij.
Pot. brom.	...	...	...	...	...	...	...	gr. iiiij.
Tr. benz. co.	...	...	...	...	...	...	...	gr. viiiij.
Spt. aeth. nit.	...	...	...	...	...	...	...	gr. xij.
Ol. petrol.	...	...	...	...	...	...	...	gr. iiiij.
Mucilag.	...	...	...	...	...	...	...	gr. q.s.
Aq. ad.	...	...	...	...	...	...	...	gr. vij.
3ij. p.r.n. pro tuss.								
P. opii.	...	...	...	...	...	...	...	gr. iiij.
Bism. subnit.	...	...	...	...	...	...	...	gr. xij.
Plumb. acet.	...	...	...	...	...	...	...	gr. xvij.
Camphor.	...	...	...	...	...	...	...	gr. xij.
Ft. pil. xij.	...	...	...	...	...	...	...
Ac. tannic.	...	...	...	...	...	...	...	gr. iiij.
Ext. bellad.	...	...	...	...	...	...	...	gr. i.
Plumb. acet.	...	...	...	...	...	...	...	gr. iiij.
Ft. suppos. Mitte vj.	...	...	...	...	...	...	...

Time allowed for the three scruples was forty-five minutes. Then I had forty-five minutes of torture spent thus : Reading about twelve or fifteen wretchedly written prescriptions, with directions. Criticising about twelve prescriptions, noting incompatibles, doses, and explaining what to do in order that the scruples should be accurately and neatly dispensed. Translate one English scrip into full Latin, including directions and doses. In posology I was asked about twenty or thirty doses of great variety and mostly uncommon, such as thymol, turpentine, sulphur, camphor, and others, such as alkaloids, extracts, zinc salts, and bismuth salts. I was asked what to do in cases of poisoning by arsenic, aconite, belladonna, morphine, cannabis indica, glacial acetic acid, mineral acids, caustic soda, carbolic acid, etc. Next I was asked to estimate how much sodium bicarbonate would be required exactly to neutralise 3ij. of citric acid, of course working from the equation.

MATERIA MEDICA.—For this I was taken to another room and subjected to the following : Required to recognise twelve drugs, such as opium, rhubarb, senna, benzoin, nux vomica, hydrastis, cinchona, sarsaparilla, scilla, jalap, podophyllum, ergot, and strophanthus. Having recognised them, had to give botanical name, order, source, percentage of alkaloids, preparations (if standardised, also state percentage of active principle). Required also to recognise twelve pharmaceutical preparations (tinctures, liniments, powders, etc.), B.P. method of preparation, with proportion of active ingredient and composition generally. I had also to give one assay-process.

PHARMACY.—Describe processes such as distillation, sublimation, rectification, maceration, etc., about a dozen in all. Definitions of tincture, liniment, aqua, pills, suppositories, pulvers, emulsions, etc. Weights and measures of B.P. and definition of specific gravity. Required to work out on paper sundry percentage calculations and specific gravities, viz. :

How much $HgCl_2$ is required for 8 oz. solution so that $\frac{1}{2}$ oz. of it when diluted to 1 pint = 1 in 1,500?

Find sp. gr. of 422 c.c. of liquid having sp. gr. of 1.662 when 180 of H_2O is added.

The time allowed for *materia medica* and *pharmacy* was one and a half hour.

VOLUMETRIC ESTIMATION.—For this three hours was allowed. One set of questions : Estimate sample of cream of tartar (atomic weights given); estimate available Cl in chlorinated lime. Another set of questions : Estimate sample of B.P. ammon. carb., and then from this the percentage of NH_3 ; explain B.P. process in estimation of Fowler's solution. I was unsuccessful in my first attempt at the Final, but at the next I satisfied the examiners. Our examinations are held half-yearly, in March and September.—E. Wilfred Sullivan (Fullerton Estate, S. Aust.).